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ABSTRACT

To provide data for the construction of an 11th or 12th grade health occupations course in a rural high school, an extensive study was made of health needs and health occupation opportunities in the Rocky Mountain region and also of the official state plans for health facilities. From this analysis, the 10 entry-level occupations of ambulance attendant, dental assistant, dietary aide, medical assistant, medical laboratory assistant, medical record clerk, nurse aide, surgical technician, visiting home health aide, and ward clerk were selected for curriculum development. Core performance elements as well as performance elements unique to each occupation were identified, and an 8-unit Health Development Career course was built upon the core performance elements. In lieu of a live situation, the model was field tested in a hypothetical situation in which the health facilities and typical experiences were identified. To assist in planning the course, guidelines for development and implementation as well as activities and instructional aids for each unit are included. Appended are an activity flow chart, research strategies, scheme for categorizing skills and elements, and example of contributions from other sources. (SB)

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A Health Career Development Program for the Rural High School

THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION

THE OHIO STATE UNIVERSITY
1900 Kenny Rd., Columbus, Ohio, 4321

VT 011 260

The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Comprehensive and Vocational Education Research, U. S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and inservice education program;

6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Resources Information Center located in the U. S. Office of Education.

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RESEARCH SERIES NO. 56
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FINAL REPORT
ON A PROJECT CONDUCTED UNDER
PROJECT NO. 7-0158
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A HEALTH CAREER DEVELOPMENT PROGRAM FOR THE RURAL HIGH SCHOOL

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The work presented or reported herein was performed pursuant to a Grant from the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

U. S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

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BUREAU OF RESEARCH

PREFACE

One of the major program area commitments of The Center for Vocational and Technical Education relates to curricular strategies; that is, the development of methods and techniques through which curriculum development can more effectively be accomplished. This reports a project which was a cooperative venture between The Center for Vocational and Technical Education at The Ohio State University and the Rocky Mountain Educational Laboratory in developing a curriculum data base useful in the development of basic vocational programs in the health occupations. In the project, health professionals worked with consultants to analyze a group of entry-level health occupations as to their common and unique performance elements and used the results of the analysis in constructing a model health career development course appropriate for use in the eleventh grade in a rural high school. We hope that this report will be of use to curriculum developers, program planners and supervisors in the health occupations in the development of other curriculum materials.

The Center is grateful to the Rocky Mountain Educational Laboratory and to the many individuals and groups who contributed to this project. Special recognition is due Harold R. Rowe, formerly a specialist at The Center and now a member of the faculty at Chico State College, for his direction of this project and the authorship of this report.

Robert E. Taylor
Director
The Center for Vocational
and Technical Education

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INTRODUCTION

Rural communities throughout the country are faced with four major problems which should establish priority for developing health occupations educational programs in rural areas. The problems are as follows:

1. Rural communities generally rank far below urban communities in their supply of trained health workers.

   Statistics which show state and national shortages of health services and health manpower seldom indicate the inequities which exist in the distribution of health manpower and facilities on an urban-rural basis. However, the U.S. Public Health Services, *Health Manpower Source Book* for 1962 showed that when compared with isolated rural areas, the greater metropolitan areas had per 100,000 population, 1.8 times as many pharmacists, 2.3 times as many active nurses, 2.6 times as many dentists and 3.7 times as many medical doctors.

2. Rural communities are typically unable to attract health workers trained outside the area.

   It is common knowledge that rural communities typically do not apply for the federal funds which are available to initiate health programs and facilities. The main reason that rural communities are reluctant to do so is their awareness of the fact that they cannot attract sufficient trained health manpower to meet the criteria for federal funding. With the exception of a very small highly motivated, altruistic minority, city-born and bred skilled health workers refuse to consider employment in isolated rural areas. Moreover, the typical career pattern of the rural-born health worker is that of migrating to an urban area for training and remaining in the urban area for employment. The pattern is consistent with an educational program which offers the student no opportunity to become acquainted with health needs and health roles in the rural setting.

3. Students in rural schools have no realistic exploration of the rapidly expanding field of health services careers.

   In the preliminary stage of the project, such health occupations programs in rural school systems as could be

observed were for the most part limited to training for nurse aide positions. Students in these programs were exclusively female. Opportunities for students' identification with a health worker role were confined to a single, dead-end, low income occupation in nursing.

4. Even with federal aid, limited financial resources would prevent rural communities from meeting all of their health service needs by employing health professionals; any realistic approach to meeting the needs involves the extension of the professionals' service by way of paramedical and supportive personnel. That is, personnel will be needed to extend the services of many health professionals in addition to nurses. Effective recruitment for a wide spectrum of vocational and technical health occupations programs as well as a wide spectrum of entry-level occupations entails provisions for first-hand acquaintance with many types of supportive health personnel.

In spite of the priority for health occupations education which the four problems establish, practically all research and development in health occupations has been and continues to be centered in large urban areas. The present project was designed to provide solutions to the problems by devising a method whereby a program in health occupations education can be established in rural schools. The project was designed to develop rural high school programs in health occupations which would provide information about health career opportunities, provide the skills and knowledges common to the occupations within a cluster, develop employable skills upon high school graduation and prepare students for post-high school training opportunities.

The project which is described in this report was an attempt to contribute to the solution of these four problems by establishing a model for a program in the rural high school which uses performance elements common to entry-level health occupations as a means of exploring careers in health.

Harold R. Rowe

SUMMARY

This is a report of a project designed to provide curriculum design data for the initiation of a health career program in the rural high school. Specifically, the project was designed to provide the essential data for the construction of a curriculum appropriate for the eleventh or twelfth grades in a rural secondary school in which the student is: 1) provided information about health career opportunities, 2) provided the opportunity to develop skills and knowledge common to a cluster of health occupations, and 3) provided a sound foundation for more specialized training in a health career field in the twelfth grade or in a post-secondary health career program.

An extensive study was made of health needs and health occupations opportunities in the Rocky Mountain region of the United States. In addition, the official state plans for health facilities, which included data on all existing as well as proposed facilities, were obtained from each state in the region. On the basis of a comprehensive analysis of the statistical data and the advice of experts in health planning in the region, 10 entry-level health occupations were selected.

The model was not field tested in a live situation. However, statistical data and community resource input was gathered from a potential site in the Rocky Mountain region which had previously expressed a willingness to cooperate. Typical experiences in health facilities in the area were enumerated and an attempt was made to match core performance elements with the facility which offered the most experience. Performance elements were not limited specifically to any particular unit of the core or to any particular type of field experience. Many of the performance elements were judged to be applicable throughout the course. Some were judged to apply at a higher level of performance than vocational, technical and professional health occupations courses.

To encourage broad interpretation of performance elements which would lead to a curriculum suited to health career development for students destined for health technologies and professions as well as those with the entry-level job goals, guidelines for the development and implementation of the course were developed. The model presented in the report is intended to join together in a cooperative effort, the school system, the local community and the health community in initiating a health careers development program. Much of the material presented in the report can be used in the development and implementation of a course in both the rural and urban setting.

A HEALTH CAREER DEVELOPMENT PROGRAM
FOR THE RURAL HIGH SCHOOL

METHODOLOGY

EXPLANATION

This project was a cooperative venture between The Center for Vocational and Technical Education at The Ohio State University and a regional educational laboratory. As originally planned, The Center would assume responsibility for the research aspects of developing a health occupations career course and the regional laboratory would be responsible for securing cooperation and involvement of a school system in which the project would be pilot tested; however, because of unavoidable circumstances, the pilot testing was not accomplished. The steps for implementing this project are shown in the Activity Flow Chart in the Appendix (Page 97).

The methodology reported here is the actual methodology employed in the conduct of the project after the plans for pilot testing were discontinued. The original project plans, which include the pilot testing of these materials are included in the Appendix of this report.

SELECTION OF CONTENT AREAS

An extensive study was made of health needs and health occupation opportunities in the Rocky Mountain region of the United States. Statistics on health manpower needs were supplied by regional medical programs, appropriate units of the U.S. Department of Health, Education and Welfare, organizations of and for health professionals, voluntary organizations concerned with health as well as state planning organizations in the respective areas. In addition, the official state plans for health facilities, which included data on all existing as well as proposed facilities, were obtained from each state in the region. On the basis of a comprehensive analysis of the statistics and the advice of experts in health planning in the region, 10 entry-level health occupations were selected. These occupations were as follows:

Ambulance Attendant

Dental Assistant

Dietary Aide

Medical Assistant

Medical Laboratory Assistant

Medical Record Clerk

Nurse Aide

Surgical Technician

Visiting Home Health Aide

Ward Clerk

CONSTRUCTION OF THE HEALTH OCCUPATIONS CAREER DEVELOPMENT CORE

In lieu of an actual field test site for developing the health occupations course, one of the potential sites for which statistical data had been collected was selected as the "hypothetical site." Health facilities which were identified within reasonable commuting distances, included an outpatient facility, a nursing home, a small hospital for short-term patients who were acutely ill, a public health agency and a facility for disabled persons. Typical experiences in each facility were enumerated and an attempt was made to match core performance elements with the facility which offered the most appropriate experience.

On the basis of consensual judgment by project staff, health professionals who were consulted, and visits to health occupations programs in operation, the decision was reached that performance elements should not be limited specifically to any particular unit of the core or to any particular type of field experience. Rather, the list of performance elements should be used in its entirety in each unit of the course as an evaluation device. Many of the performance elements were judged to be applicable throughout the course and some were judged to apply at a higher level of performance to vocational, technical and professional health occupations courses.

Using the facilities of the University and Research Center libraries, the resources of the VT-ERIC Clearinghouse located at The Center, and documents owned privately by Center staff, a search was made of all instructional materials which were designed to prepare for job entry into any of the nine entry-level occupations. "Instructional materials" was defined broadly to include course outlines, syllabi, textbooks, manuals and programmed instruction devices.

The first step in the analysis was that of identifying in the instructional materials passages which stated or implied a performance element in a particular occupation. Performance elements were defined as descriptions stated in operational or behavioral terms of activities which were parts of the function of a given occupation. If a performance element occurred in two or more instructional materials for the same occupation or, if the performance element was in the judgment of the project staff of critical significance to the occupation, it was reviewed in greater depth using the following criteria:

1. Is the meaning clear? Would everyone interpret the performance in the same way?

2. Is it an element which can be acquired through the educational process?

3. Is there at least one situation in which the element would improve the quality of overall performance of the job?

Performance elements which met the criteria in the judgment of the three health professionals on the project staff, were categorized and coded. The code assigned to the element identified it both as to occupations to which it applied and as to content domain under three general headings--knowledge, skill, or attitude (Appendix, Page 105). The element and its coding were recorded on a card specially devised for the project which permitted rapid sorting of elements by code categories.

After the coding, cards containing the performance elements were sorted by occupation and after removal of duplicates, the elements for each occupation were evaluated in two ways by two groups of experts. One group consisted of teachers and supervisors of workers in the respective entry-level occupation. The second group consisted of workers in the entry-level occupation. Each group evaluated each element under the respective occupation in the two following ways:

1. The degree to which the element was essential for performance of the occupation.

2. Whether the skill, knowledge or attitude was best learned in the classroom, the laboratory, or on the job in the clinical situation.

Guided by the evaluations, performance elements, which were judged to be valid and applicable for classroom or laboratory teaching, were sorted by content domain and those elements which were common to the greatest number of occupations were selected as the core of the eight-unit Health Occupations course.

Guidelines for the development and implementation of the course were developed (see Page 75) to encourage broad interpretation of performance elements which would lead to a curriculum suited to health career development for students destined for health technologies and professions as well as those with the entry-level job goals.

"Simulation Sessions" were conducted by health professionals for the project staff. In these sessions the entire list of performance elements was applied to each health facility. Educational experiences were identified that should occur in the clinical setting in order to achieve the desired performance. On the basis of explorations in the simulation sessions and consultation with service and education staffs in similar health facilities, an eight-unit health career development course was constructed. The activities and aids to be used in such a course are included under "Results" on Page 7.

RESULTS

Activities of The Center's project staff resulted in materials which should be useful in establishing a health career development course in rural and urban settings. The results which follow are Core Performance Elements; that is, performance elements that were found to be common to at least several of the 10 selected entry-level health occupations; Unique Performance Elements; that is, performance elements which occurred exclusively or almost exclusively in one of the 10 health occupations, and a Health Career Development Course with suggested Activities and Instructional Aids; that is, suggested educational activities and aids to be used in an eleventh grade health occupations course.

The Health Career Development Core was built upon the core performance elements. The Unique Performance Elements do not pertain to the core which is planned for the eleventh grade of school. The Unique Performance Elements could be useful in planning programs for specific programs to prepare for entry-level jobs after completion of the eleventh grade core.

CORE PERFORMANCE ELEMENTS

PERFORMANCE ELEMENTS FOR INCORPORATION

ELEMENTS REGARDING WORK SITUATION

Has a general appreciation of the activities of personnel in health care institutions.

Develops understanding of the organization of the medical staff in his work situation.

Knows the definition of the majority of present day health care specialities and the standard title of a person practicing in those specialities.

Knows how to find the definition of health specialities with which he is not familiar.

Can describe the responsibilities of the people with whom he works most closely, the relationship of his work to theirs, and his value in patient care.

Knows how to find out about opportunities for advancement in his chosen field.

Can locate information about services offered by health and other service agencies in the community and state.

Is able to describe some of today's major health problems and their contributing factors.

Develops skill in asking questions to determine the scope, responsibilities and limitations of his job.

Asks questions to find out what is considered "appropriate" and/or "in good taste" concerning dress, make-up, hair style, jewelry, accessories, etc., for the institution or position.

Can use policy and procedure manuals, reference books, workbooks and bulletin boards and keep them readily available and in order.

Plans work considering relative importance of tasks, needs of other health team workers, and needs of patients and their families.

Developes increasing ability to assess situations and determine priority for actions in routine and emergency situations.

Performs within limits of training and ability.

Knows how to report when he must be absent or late.

Knows how to find out about personnel policies which affect him in his job.

Knows to whom to report work problems.

Demonstrates an understanding of the limitations of his knowledge, and avoids premature conclusions and advice.

Maintains the confidential nature of information relating to patient care and condition.

Uses established procedures to safeguard patients' belongings.

Understands hospital's liability for safe keeping of patients' property.

Questions when asked to perform procedures not within delegated duties.

Asks for guidance when in doubt about implementing a procedure.

Plans work for economy of time, motion and equipment.

Works within limits of delegated and established procedures.

Refers problems for proper disposition.

ELEMENTS REGARDING SAFETY

Is alert to potential environmental hazards.

Places furniture and equipment for convenient and safe use.

Removes spilled liquids, broken glass and other objects from the floor.

Demonstrates understanding of fire prevention and control by:

- keeping stairways and shaft doors closed
- disposing of combustible materials in appropriate containers
- following employee smoking regulations
- removing spark producing equipment or materials before beginning procedures using oxygen or other explosive gases.

Knows how to activate institutional fire alarm system.

Knows location of and how to operate fire extinguishers.

Knows location of and use of fire exits.

Knows location of equipment and procedures for carrying out first aid in emergency and/or accident in the department.

Demonstrates understanding that hospital personnel are responsible under law to carry out the care of a patient and in a manner that keeps the patient safe from harm.

Identifies patient accurately and in an appropriate manner.

Asks patient to identify himself.

Calls patient by name, not by room or bed number.

Checks identification marker of patient when moving, transporting, observing, reporting, recording, when giving personal care, medication, treatment, or diagnostic test, and when transferring responsibility.

Instructs patient as to safety measures in the use and disposal of tobacco and matches.

Knows hospital routine for fire in patient area and follows procedures for closing doors, reassuring and aiding patients.

Follows established procedures for security of medical supplies.

Knows and follows narcotic security practices.

Follows directions in the application of heat and cold.

ELEMENTS REGARDING FIRST AID

Has sufficient knowledge of common medical conditions and the most common medical emergencies to obtain and transmit relevant information.

Recognizes local and general, external and internal, effects of shock and hemorrhage.

Understands the importance of maintenance of respiratory function, and can check for open airway, perform mouth to mouth resuscitation, use mechanical resuscitation equipment

with safety, use oxygen and suction equipment, and perform closed chest heart massage.

Has sufficient knowledge of common medical conditions and the most common medical emergencies to appropriately give first aid.

Understands and develops skill in use of pressure dressings, manual pressure, and tourniquets, to stop bleeding.

Knows how to locate and how to contact nearest poison control center.

Is familiar with emergency care of victims of poisoning and of overdosage of drugs.

ELEMENTS REGARDING TERMINOLOGY

Knows the common word elements used to formulate medical terms for the body parts and systems, for the most common diseases and conditions, diagnoses, and surgical procedures.

Pronounces and interprets medical terms correctly.

Follows directions given in medical phraseology.

Uses a glossary, dictionary or medical dictionary to check meaning and spelling of terms.

Demonstrates ability to find further information about patient care or condition by appropriate use of: Kardex, charts, procedure books, dictionary, medical dictionary, glossaries, work area reference books, library facilities.

Makes accurate use of pertinent medical terminology in writing and reading reports and in verbal communication concerning patient care.

Develops ability to recognize the meaning of unfamiliar words on the basis of the word roots which they contain.

Is able to define medical terminology in lay language.

Knows who has the responsibility for completion of the various sections of the medical record.

ELEMENTS REGARDING COMMUNICATIONS

Recognizes and immediately reports deviations from normal range in patient's vital signs and significant changes in patient's condition.

Notes, observes and reports signs which would indicate an undesirable reaction to medication or treatment.

Asks for guidance in considering requests of patients who are restricted as to diet, activities, fluids, etc.

Reports comments about care and service to superiors.

Assists other health team members with patient examination, diagnostic test treatment or care.

Checks that patient's name and/or identifying data is on each page of patient's record.

Is conscientious and accurate in reporting pertinent patient's information about the care and condition.

Demonstrates tact in giving and withholding information relative to patient care and the operation of the hospital.

Is familiar with authorization and accident report forms and follows established procedures for their use (e.g., autopsy, surgery, diagnostic tests, discharge forms).

Cooperates in a courteous manner with personnel in other departments.

Knows the names, functions and abbreviations of other departments or agencies with whom he has written or telephone contact.

Is able to complete reporting forms, interoffice forms, and forms requesting referral to other institutions or departments.

Is able to prepare written communications for ordering equipment, and requesting information or assistance.

Writes reports that are accurate, complete, understandable and legible.

Uses notes or other reminders to insure accuracy of reports.

Reports malfunctioning equipment and accident hazards.

Follows directions for summoning and directing aid and reporting medical or other emergencies.

Can follow written and verbal directions in carrying out procedures.

Is able to use the telephone to give and receive information accurately and courteously.

Answers telephone calls promptly.

Allows caller to express himself.

Can use telephone for incoming and outgoing calls and transferring calls in institution or agency.

Demonstrates ability to operate signaling system, paging system, and intercom system in institution or agency.

Is aware of and follows established procedures relating to release of information to law enforcement officers, insurance representatives, family, patient, and other hospital and health personnel.

ELEMENTS REGARDING HEALTH AND HYGIENE

Follows precautionary policies of the institution or agency, set up to protect health of personnel and patients.

Uses good body mechanics to minimize physical strain and/or injury when lifting, pushing, reaching, stooping.

Requests assistance to move patients who are heavy or difficult to move.

Incorporates principles of good health and hygiene and grooming into personal daily living habits.

Maintains acceptable skin care through bathing personal cleanliness, use of deodorants, etc.

Maintains a healthy balance of rest and activity.

Is able to relate personal hygiene measures to a knowledge of microorganisms and body defenses in health and disease.

Uses good body mechanics to minimize physical strain when sitting, standing, and walking.

Avoids injury to self and patient by practicing good body mechanics when moving patients.

Handles patient, and equipment used in the care of patients, firmly but gently.

Demonstrates ability to position patients with attention to good body alignment.

Can distinguish between food fads and diets which are based on scientific principles of nutrition.

Can explain how disease may result from an unbalanced diet and from lack of certain foods.

Can relate differences in food needs to differences in age, development, and activity of individuals.

Shows appreciation of the effect of family customs and personal opinion on the food habits.

Shows appreciation of the differences in food habits which are associated with differences in national origin, regional patterns and religious and socioeconomic backgrounds.

Assist in teaching patient hygiene.

Has sufficient knowledge of common medical conditions and the most common medical emergencies to be able to assess indication of urgent need for medical care.

ELEMENTS REGARDING ASEPSIS

Follows handwashing practices according to procedures set to maintain control of infection.

Washes hands before patient care procedures, or before handling clean equipment, linen, food and food equipment.

Washes hands after handling soiled equipment and supplies, linen, patient discharges, or after giving patient personal care.

Has clean nails, short enough to not interfere with procedures.

Keeps hair clean, neat and under control by styling, arrangement, spray or uses hair net or cap to cover hair where required.

Carries out procedures to prevent spread of infection from clothing worn by hospital employees and visitors.

Keeps work areas clean and free of clutter.

Has sufficient knowledge of microbiology to understand established procedures concerning sterilization and aseptic technique.

Recognizes by name bacteria and organisms which present the greatest danger and knows their common modes of transmission.

Follows procedures for separate storage of sterile and unsterile supplies and equipment.

Understands terms used in sterilization and disinfection sufficiently well to follow instructions or follow procedures for cleaning, disinfection and sterilization.

Follows and helps enforce established procedures for aseptic control by restricting unauthorized persons to certain areas.

Follows prescribed policies in reporting infections and open lesions.

Controls cross infection by following safety precautions in disposal of waste.

Is able to use sterile transfer or pickup forceps without contaminating them.

Is able to open containers of sterile supplies without contamination of contents, or inside of pack, container or lid.

Recognizes that all specimen collecting containers are a possible source of infection and handles them accordingly.

Correctly uses and disposes of equipment and supplies used in the care of patients in isolation.

Stores food items in designated place at correct temperature to prevent spoilage and contamination.

Detects and discards food spoilage.

ELEMENTS REGARDING INTERPERSONAL RELATIONS

Is able to maintain his own emotional control when carrying out orders to restrain unruly or disturbed patients.

Is able to maintain objectivity when criticized.

Has sufficient knowledge of common personality disorders and common mental disturbances to be able to assess approach to patient care and to recognize gross abnormalities.

Is able to recognize and accept emotional reactions commonly seen in illness and crisis situations.

Is aware of the influence of his conduct and attitudes upon the emotional state and behavior of others.

Maintains respect for the individual emotionally distraught patient.

Is able to work effectively with persons whose social standards of behavior differ from his own.

Demonstrates calmness and objectivity in working with uncooperative persons.

Is able to maintain a reasonably calm, unhurried attitude in tense situations.

Seeks guidance from professionals for help in individualizing care of patients with special or severe emotional problems.

Assists in carrying out plans for helping patients and families adjust to special problems.

Introduces self to patient, and tries to make him feel at ease.

Appears by posture, conversation and expression to be interested in patient and/or visitor and/or co-worker.

Makes appropriate referrals of expressed or obvious social service, home nursing, emotional or spiritual needs of patients.

Helps the patient and family to understand and follow directions of the specialist.

Participates in plans for the patient's rehabilitation by encouraging the patient to develop physical independence.

Explains the patient's rehabilitation to his family and assists them in participating in the plan.

Makes arrangements for simple types of diversion or recreation of the patient.

Gives patient recognition when progress is made or goals are reached.

Knows to whom to report patient care problems, and how to ask for, and offer help.

Develops ability to work cooperatively with the others in care of patients.

Develops ability to assess and use language the patient understands in explanations of procedures and in teaching health care.

Respects patients' needs for privacy in ways such as: pulling cubicle curtains when giving care, knocking on door before entering, addressing patient by name before entering curtained cubicle, draping patients adequately during treatment.

Shows awareness of the effects of growth and development by adapting patient care to the patient's age and level of development.

Allows patient mental and emotional privacy as needed in accepting their reactions to pain, tension and embarrassment.

ELEMENTS REGARDING USE OF EQUIPMENT

Recognizes and identifies commonly used instruments and equipment.

Follows procedure books or instructions in determining the equipment and supplies needed for treatments or procedures.

Demonstrates good planning by collecting well in advance of assigned tasks all necessary supplies and equipment.

Follows instructions for reading and reporting on devices, such as gauges, meters, dials, indicators, numerical counters, at appropriate intervals.

Identifies and stores poisonous and harmful chemicals, according to procedures, to prevent misuse.

Follows procedures for periodic checks of cleanliness and operation of equipment.

Reports and avoids use of damaged equipment.

Checks inventory and orders unit supplies.

Collects and returns equipment to supply room.

Selects appropriate equipment and supplies for cleaning and other procedures, and uses, as specified.

UNIQUE PERFORMANCE ELEMENTS

AMBULANCE ATTENDANT

Demonstrates an awareness of Federal and State statutes and knowledge of local ordinances related to emergency vehicles, ambulance operators, and attendants.

Follows regulations established for licensure and safety inspection, rate of speed, use of light, sirens, flares, identification symbols and safety specifications for use of ambulance and equipment.

Understands liability legislation, liability insurance, and protection under "Good Samaritan" law.

Maintains safe speed when operating ambulance considering weather, streets, traffic, driver condition and victim condition.

Understands principles of the internal combustion engine and is able to make minor repairs to vehicle.

Follows procedure in cleaning and checking vehicle after each run to ensure instant and efficient performance.

Arranges for thorough periodic check of automotive equipment according to local policy.

Decontaminates inside of vehicle after transport of victim with contageous infection or radiation exposure.

Follows procedure in periodic check of inventory cleanliness and operation of life saving tools and equipment.

Knows how to find and evaluate information about types of ambulance, emergency and rescue vehicles available, considering criteria for choice for local situation.

Plans arrangement of rescue and emergency equipment in available vehicle to permit secure arrangement and ready access, without overloading vehicle.

Knows procedures established for summoning aid of rescue equipment of heavy-duty mobile equipment such as power shovels, bulldozers, cranes, and of waterfront equipment and helicopter.

Is able in extreme situations to carry out certain necessary functions usually performed by police officers, firemen, rescue personnel, public utilities personnel or clergy when they are not on the scene.

Acts within limits of training and ability.

Avoids assuming functions of police or other authorities when they are present.

Attempts rescue procedures only when qualified and when more qualified rescue personnel are not present.

Demonstrates skill and safety in use of sharing and tunnelling to extricate victims from building debris, tunnels, wells, caves, etc.

Demonstrates skill and safety in extricating victims from automotive vehicles, aircraft, farm and industrial machinery.

Develops skill in use of light rescue equipment on ambulance such as lifting, prying, battering, hammering, boring, drilling and cutting tools for access, and of rope straps, rigging and backboards for removal.

Demonstrates skill in use of drugs, carries, litters, backboards, chairs, ladders and rope slings for short-distance removal of victims.

Demonstrates skill and safety in forced entry into locked or blocked living or working areas.

Demonstrates skill and safety in use of warning flags and flares.

Demonstrates skill and safety in use of fire extinguishers, protective clothing, helmets, rubber gloves and protectors, wire cutters, hot sticks and other electrical safety equipment, and uses atmosphere testing, shut-off keys, wrenches and gas mask equipment.

Is aware of hazards of gas in local area industries and maintains a reference chart for expected level of explosion possibility, need and type of gas mask use, action and effect of gas upon victim and treatment of victim.

Anticipates en route to accident scene, possible hazards posed by location and type of accident.

Prevents further accident by regard for life threatening situations involving fire, flood, power lines, chemicals and explosive gases.

Uses precaution in parking ambulance and setting up warning devices to divert traffic.

Restrains bystanders from crowding or mishandling victims.

Develops ability to direct volunteers to aid in specific tasks if necessary.

Helps relatives cope with emotions.

Is aware of regulations covering the use of radio communications equipment and uses radio transmitter-receiver according to established procedures.

Uses walkie-talkie for auxiliary communication.

Is familiar with use of radio dispatch, signal, coding and transmitting system and methods of cross communication with other systems.

Uses ambulance radio equipment in answering emergency calls, mobilizing rescue equipment and personnel, alerting hospital emergency departments of expected arrival and condition of victims, receiving advice on rescue, care and transport of victims.

Is aware of community emergency policies and procedures for summoning specialized local personnel when necessary in rescue and care of victims.

Is aware of and assists with evaluation and planning with local authorities, civil defense organization, law enforcement officers, hospital authorities in developing community emergency procedures and communication procedures for summoning specialized local personnel and equipment when necessary in rescue and care of victims.

Makes records of information necessary for medical facilities such as identification, type of accident or nature of illness, location of victim when first seen, rescue, on-site and transport care and condition.

Records identification and circumstances required by coroner or medical examiner in case of death at scene or during transport.

Records information required by health department such as animal bites, radiation, chemical or gas hazards.

Notes valuables and records disposition of valuables.

Safeguards weapons that have been or may have been involved in homicide or suicide.

Collects suicide notes, or related papers for legal authorities.

Records information needed by law enforcement departments such as pertinent statements of those not available later for full interrogation, circumstances in suicide, homicide or rape; animal bites; voluntary dying statements and statements of victim or others that may serve as testimony.

Is aware of the use of records in transferring responsibility and follows established procedure in filling out reports.

Records required administrative information such as time intervals of accident, dispatch, arrival at scene, departure, delivery to emergency department.

Records information concerning notification of authority, request for help, notification of hospital, care given by physician on scene.

Reviews and evaluates dispatching, run, care given en route, equipment, control of scene and/or family, medical assistance, transportation problems, hospital, law enforcement, and other interpersonal relations in order to plan better service.

Knows and follows established procedures in care of patient, clothing, equipment, apparatus, and vehicle in handling emergencies involving communicable disease.

Understands the usual reactions seen as a result of large-scale emergencies and helps prevent problems by reassurance, gentle, firm, assistance, isolation of panic victims if necessary, and assessment and acceptance of individual reactions.

Demonstrates knowledge of initial care, precautions, and possible cardiopulmonary complications during transport, in caring for victims of exposure to cold, heat, radiation, pressure and in electrical injuries, electrical shock, near-drownings, explosions, and drug intoxication.

Has sufficient knowledge of common medical conditions and the most common medical emergencies to be able to assess indications of urgent need for medical care, to appropriately give first aid (prior to and during transport) and to obtain and transmit relevant information, e.g., cardiac patient, diabetic in coma or insulin shock, asphyxia, epilepsy, snake bite, poisoning, stroke, acute alcoholism.

Develops increasing ability to assess emergency situations and to determine priorities for action in emergency situations.

Knows the relationship of injuries and stress to changes in pulse, respirations, blood pressure, skin temperature, color of skin and mucous membranes, pupils, state of consciousness, or to paralysis, and anesthesia.

Is conscientious and accurate in reporting pertinent patient information, care and condition.

Recognizes changes in patient's condition and promptly reports change.

Assists patients in religious needs by appropriately reporting or directing requests.

Is familiar with terminology in relation to wounds and injuries.

Understands and develops skill in use of pressure dressings, pressure points, and tourniquets, to stop bleeding.

Recognizes local and systemic symptoms of hemorrhage.

Demonstrates awareness of the importance of prevention of infection during emergency care.

Understands the physiology of labor and delivery sufficiently to be able to assess the progress of labor, assist the mother and transport her safely to the hospital.

Knows contents of the ambulance OB kit for emergency childbirth and the use of each article in the kit.

Knows how to attend to the basic immediate needs of the mother and newborn.

Knows the symptoms of abortion and the care of victims of attempted abortion.

Has sufficient knowledge of common mental disturbances such as delerium tremens, hysteria, amnesia to be able to assess need for special precaution in transporting patient to medical care.

Is aware of the emotional effect of illness and behaviors commonly seen in emergency situations.

Understands the influence of his conduct and attitudes on the emotional state and behavior of others.

Maintains respect for the individual patient or victim as a part of his overall approach to the situation.

Restrains disturbed or unruly patients or victims without unnecessary discomfort to them.

Knows the dangers to sight of loss of fluid from penetrating eye wound and explains care, bandages both eyes gently, keeps victim on back.

Is able to recognize signs and symptoms of abdominal injuries to give emergency care for shock, protruding organ, and to transport safely patients with such injuries.

Is able to recognize signs and symptoms of penetrating chest wound and seal the wound from the outside as quickly as possible, to use oxygen therapy, and to transport safely patients with such injuries.

Gives emergency care in convulsions to reduce high fever if necessary, uses mouth gag, keeps airway open, and protects from injury during transport.

Examines every unconscious victim who seemingly suffers from alcoholic intoxication, for symptoms of diabetes, epilepsy, inadequate airway or other medical problems.

Knows the classification of burns and is able to estimate the extent of burns.

Knows the complication to burn victims of loss of body fluid, pain, psychological distress and infection, and administers first aid during transport.

Is able to recognize fractures, and possesses skill in a variety of methods of splinting and bandaging to immobilize parts of the body.

Prevents further trauma to fractures by safe moving and transporting.

Develops skill in appropriate techniques of handling extremities, moving victims, dressing, splinting and positioning victims during transport.

Possesses skill and adeptness in performing the following procedures: application of arm slings, application of ace bandage, application of tourniquet, setting up oxygen equipment, regulating oxygen flow, administering oxygen, checking and regulating flow of intravenous solution, checking and regulating flow of blood transfusion, setting up aspiration or suction equipment, aspirating patient, suctioning patient.

UNIQUE PERFORMANCE ELEMENTS

DENTAL ASSISTANT

Assists in establishing a comfortable relationship between the young patient and the dentist.

Makes appointments considering the convenience of patient, doctor and allows sufficient time to complete operation.

Keeps appointment book legible, neat, up to date and designates holidays, vacations and leaves.

Maintains a system for periodical recall of patient.

Reminds patients of appointments by telephone or mail.

Keeps necessary financial records.

Compiles necessary records for case presentation.

Explains credit policies to patients and collects fees.

Plans and executes routine for maintaining a clean and functional office and operatory.

Maintains and controls inventory of office and operatory.

Carries out, or arranges for daily housekeeping duties.

Seats or positions patient with attention to patient's comfort, protection and type of procedure.

Places x-rays and clincal records for the convenient use of dentist.

Maintains an effective pattern of serving and receiving instruments.

Places instruments needed for operation in convenient and orderly fashion.

Sets up instruments for a variety of operative and nonoperative procedures.

Has adequate functional knowledge of dental terminology pertaining to specialties - instruments, diseases and anatomical areas.

Possesses detailed knowledge of anatomical structures and areas of the head, neck, and oral cavity.

Can identify and locate teeth and teeth surfaces.

Can explain to patient how and when teeth erupt.

Can answer intelligently patient's questions concerning common dental pathologies.

Observes rules made to protect everyone in the office from over exposure to x-ray.

Can accurately develop x-ray film.

Maintains an effective and orderly darkroom with proper lighting, supplying and procedures.

Can operate x-ray machine following established procedures.

Can identify and prepare for use a variety of x-ray films.

Can store unused x-ray films for protection and accessibility.

Can identify, utilize, clean and maintain dental equipment.

Mounts x-ray films so that they can be easily identified and read.

Can store and file x-ray films according to office procedure.

Instructs patient in proper use of toothbrush, dentifrices and methods of cleaning the teeth.

Instructs the patient in proper oral hygiene.

Gives patient instructions for postoperative care.

Can pack dies, cast and polish gold inlays.

Can pour, trim and label models.

Can make emergency repairs of dentures.

UNIQUE PERFORMANCE ELEMENTS

DIETARY AIDE

Uses and understands terminology common to food service and preparation.

Serves trays with attractive arrangement of foods and utensils.

Can detect the presence of insects or rodents and implement measures for control of them.

Identifies and utilizes food high in the basic nutrients, minerals and vitamins.

Can assess and maintain the cleanliness of utensils or areas.

Washes utensils in proper way, using prewashing scraping, detergent and hot water.

Assists with food cost and control by keeping accurate records.

Can read symbols for weights and measures.

Can identify various sizes of cans of food according to numerical system.

Follows prescribed procedure for ordering food and non-food items from storage.

Stores food items and non-food items in designated place and at correct temperature.

Can interpret words and symbols used on menus.

Delivers and picks up patient's trays according to prescribed procedures.

Can identify, utilize, clean, maintain, and store dietary tools and utensils.

Is able to operate and clean a variety of equipment within the food service system.

Keeps equipment clean and properly serviced.

Can identify, store, clean and use with economy non-food supplies.

Can identify, prepare, serve and store a variety of cold foods.

Can assist with the preparation of hot foods.

Can prepare and serve simple hot foods (e.g., beverages, cereal, canned soup).

Follows established recipes in preparing foods.

Can carry out the duties necessary for employee food service.

Keeps accurate records of food items used.

Checks food trays for correctness of food items in accordance with dietary restrictions.

Has an elementary knowledge of the variations in food service systems.

UNIQUE PERFORMANCE ELEMENTS

MEDICAL ASSISTANT

Develops skill in speedy proofreading for errors.

Applies secretarial skills and practice to physician's correspondence, record keeping and retrieval.

Maintains supply inventory.

Orders, checks deliveries, labels and stores medical supplies, and equipment, linen and stationery supplies.

Sorts incoming mail.

Prepares outgoing correspondence.

Takes dictation.

Transcribes from dictating machine.

Types 40-60 words per minute, corrected, with one carbon copy.

Files correspondence.

Maintains a reminder card file such as a tickler file for periodic office tasks and recalls.

Obtains information for patient's medical records.

Records personal information about patient.

Files patient records.

Locates patient records.

Prepares medical records for permanent filing according to specified procedure.

Knows established procedures for preventing and finding misfiles.

Keeps appointment book.

Makes appointments allowing sufficient time for examination and treatment and following procedures set for individual doctor's needs and preferences.

Makes appointments considering immediacy of needs of patients.

Makes referral appointments for patients.

Cancels and reschedules appointments.

Follows up and reschedules missed appointments.

Develops ability to assess emergencies that would require immediate attention of the physician.

Follows established procedures for locating the physician.

Notifies patients in case of physician delay.

Contacts telephone answering service.

Maintains a system of bookkeeping as needed by the office.

Uses journal and other business forms for necessary, accurate and complete financial records.

Maintains petty cash account.

Pays bills, checks and files invoices.

Makes out checks, endorses checks, makes bank deposits and reconciles monthly bank statement with checkbook.

Maintains record of office payroll.

Understands social security and withholding tax procedures and computations of payroll tax deductions.

Keeps records for income tax reports.

Computes patient fees.

Explains fees to patient.

Maintains patient accounts.

Identifies patients entitled to medical insurance.

Understands and follows procedures in reporting care on insurance claim forms and collecting fees from a variety of insurance plans including medicare, workmen's compensation, pre-paid health insurance, etc.

Mails statements to patients.

Writes receipts.

Establishes procedures for collecting delinquent accounts.

Is familiar with outpatient department procedures involving medical records.

Is familiar with use of specialized registries in follow-up of patients and future research.

Is able to identify and explain meanings of the basic stems, prefixes and suffixes of the most common medical terms.

Is able to identify and explain the meaning of singular and plural noun formations, homonyms and other terms that are easily confused, of the most common medical terms.

Develops ability to identify and explain meanings of scientific and nonscientific descriptive terms, eponyms, common disease terms, abbreviations and hospital terms.

Transcribes histories, physical examinations, consultations, diagnostic test reports, and operative reports.

Is familiar with the content, use and requirements of records and reports necessary for patient history, condition, care, diagnostic tests, therapy and progress and check for completeness and accuracy.

Has sufficient knowledge of anatomy and physiology to detect errors and omissions in reports.

Knows where to find out about laws applying to medical records and policies concerning release of information.

Prepares reports of births, deaths, communicable diseases and other data for health departments.

Is familiar with common statistical uses of birth, death, morbidity and communicable disease data.

Is familiar with medical societies and keeps records, reports, committee minutes and correspondence concerning membership and meetings.

Maintains physician's library including subscriptions for medical journals and reprints of articles.

Types original manuscripts in required form for submission to journal or publisher.

Proofreads manuscripts and corrects manuscript proofs.

Conducts necessary library research and prepares index for manuscript.

Mails manuscripts.

Types speeches.

Understands techniques and is able to illustrate and interpret data in tables, graphs, etc.

Places local and long distance calls for doctor.

Makes travel arrangements for physician.

Schedules activities during physician's absence from office.

Knows the hospital and unit admission procedures for both routine and emergency admissions, including the responsibilities of other personnel, as well as her own responsibilities.

Knows the meaning of the descriptive terms applying to laboratory departments (e.g., cytology, histology) and uses a reference list of common tests to check when transcribing doctor's orders to laboratory requisitions.

Transfers results of laboratory tests to summary laboratory sheets on patient's charts.

Recognizes and copies accurately generic or brand name of drug and abbreviations for indications of way in which drug is pharmaceutically prepared.

Recognizes and copies accurately symbols of apothecary and metric systems for dosage of drugs.

Recognizes and copies accurately symbols, abbreviations and qualifying phrases concerning method of administration of drugs.

Recognizes and copies accurately symbols and abbreviations for p.r.n. orders, single dose orders, and stat. orders.

Introduces self to patient and tries to make him feel at ease.

Measures and weighs patients.

Prepares patients for medical examination, diagnostic test or treatment.

Checks and records TPR and B/P.

Assists doctor with physical examination.

Helps patient plan for special diet from list of allowed foods.

Knows fluid measurement of glasses and cups commonly used by patients.

Follows appropriate procedure in collecting urine specimen.

Measures specific gravity of urine.

Tests urine for sugar and acetone.

Relates variation in patient's weight to changes in diet, fluid balance, activity and medication.

Operates standing scale to weigh patient.

Records patient's weight on chart.

Checks patient's knowledge of health care, diet, prescriptions, treatment and appointment for doctor's office or clinic.

Accurately takes temperature and reads clinical thermometer for oral, rectal, and axillary temperatures.

Recognizes and reports deviations from normal temperatures.

Identifies and describes variations in rate, strength, volume, and rhythm of pulse and relates to health and illness.

Can describe normal range of pulse and demonstrate most common places to count pulse.

Reports deviations from normal rate and rhythm of pulse.

Understands the terms used in reference to blood pressure and factors which cause variations in blood pressure.

Is familiar with stethescope and sphygmomanometer.

Accurately measures patient's blood pressure.

Recognizes and reports deviations from patient's normal blood pressure.

Accurately records blood pressure on patient's chart.

Counts patient's respiration without patient's knowledge.

Can describe conditions that affect respiratory rate and describe variations in character and rate of respirations.

Recognizes and reports respirations abnormal in rate or character.

Fills hypodermic syringe.

Applies and removes artificial limbs.

Applies arm slings.

Applies ace bandage.

Sets up equipment for application of casts.

Understands the definition of terms used in relation to sterilization and disinfection.

Demonstrates understanding and skill in disinfection and care of clinical thermometer.

Follows specifically prescribed procedures in soaking, cleaning, and sterilizing instruments, trays, basins, and other equipment to be used in the examining room.

Prepares and labels solutions, instrument trays, gloves, linen, basin, and other packs in preparation for autoclaving.

Understands principles of sterilization by immersion in boiling water, and follows procedures of method and timing.

Follows prescribed procedures for sterilizing equipment and supplies, demonstrating ability to identify in procedure book sterilization time and method considering thermal death times for organisms, and material to be sterilized.

Safely loads and operates autoclave according to procedures, with attention to placement of items and packs, use of autoclave tapes and calculation of pressure, temperature and time for type of load.

Demonstrates ability to use graphic charts of sterilizers to record temperature duration, and pressure of steam exposure.

Interprets and prevents problems arising in autoclaving such as stained instruments, brittle or sticky tubing, damp linens, etc.

Checks expiration dates, color tapes, or other indicators of sterile shelf life of supplies, and separates, resterilizes, or discards expired supplies according to established procedure.

Stores clean, unsterile, and sterile equipment separately in prescribed position.

Washes and scrubs hands according to specific procedures.

Puts on gowns and gloves according to procedure.

Assists surgeon with gowning and gloving.

Assists with removing gloves and gown.

Drapes tables and stands according to predicted needs and prescribed procedure.

Sets up tables and stands, basins and linen prior to commencement of surgery according to predicted needs and convenience of surgeons and assistants.

Checks with surgeon or his assistant, prior to commencement of surgery that all needed equipment and instruments are available.

Follows special care procedures for examining room and equipment in cases of skin infection, burns, or surgery involving severely affected area.

Uses gloves and follows special procedures during cleanup following contaminated cases, opening and presoaking all instruments before placing in instrument washer, discarding used and unused linens in specially marked bags, and carefully discarding contaminated materials.

Uses proper technique and precautions in collecting and handling specimens for pathological studies.

Prepares, preserves and ships serological specimens.

Cleans and restocks supply shelves and containers according to established procedure.

Cleans and checks working parts of all examining room equipment.

Reports defective or misplaced equipment.

Follows procedure in maintaining, caring for, testing, and manipulating, surgical instruments, equipment, and supplies.

Operates and adjusts positions of all types of examining tables used in the institution.

Is familiar with the terminology used in connection with the adjustments of the table and the positioning of the patient.

Prepares examination room according to procedure.

Cleans examining room equipment and changes supplies between patients according to established procedure.

Knows terms and names of equipment used in most common medical procedures and tests.

Recognizes instruments and identifies them by correct name.

Cleans and stores instruments.

Cleans and cares for sterilizing equipment.

Understands and follows procedures in use of equipment for cleaning and of linens, dressings, solutions, glassware sterilizing and other supplies used in examining room.

Arranges reception room furniture and office furniture and equipment in examining rooms.

Arranges for repairs and custodial service.

UNIQUE PERFORMANCE ELEMENTS

MEDICAL LABORATORY ASSISTANT

Observes laboratory safety practices and regulations in respect to fire hazards and burns, labeling and handling of corrosive acids and poisons, poisonous fumes, breaking of glassware and other laboratory accident hazards.

Can administer first aid treatment for cuts, needle pricks, and for burns from flame, hot objects and from chemical agents.

Does not reuse equipment that has contained poison until thoroughly cleaned and sterilized.

Does not reuse unlabeled used containers.

Uses bulb operated suction instead of mouth pressure in filling and emptying instruments when working with acids or poisons.

Pours solutions from bottles safely.

Understands statements of concentrations of solutions and can accurately follow procedures in making up solutions such as molar, normal, percentage, isotonic, hypotonic, hypertonic, saturated, unsaturated, supersaturated, standard, stock, dilute, concentrated, physiological saline.

Uses proper indicator for pH determination.

Follows procedure for titration, neutralization, and filtration of an insoluble precipitate and for serial dilution methods.

Can use volumetric glassware such as flasks, pipets, and burets to measure volume accurately.

Has a working knowledge of the metric system of weights and measures.

Properly uses measuring devices such as meter stick, millimeter rule, calipers, graduated cylinder pipettes, volumetric flash, burette, equal arm balance, triple beam balance, analytical balance, thermometer stop watch, interval timer.

Estimates size of beaker needed for quantity of material being used.

Skillfully and safely handles glassware as required, such as cutting and bending glass tubing, and attaching to rubber tubes and to corks, cleaning, firepolishing and sterilizing glassware.

Is aware of importance of cleanliness of glassware in results of tests.

Can wash and sterilize glassware.

Can prepare monthly and annual reports from ongoing report forms, according to established procedure.

Files duplicate report forms for laboratory records.

Uses microscope skillfully with correct use of mirror, illumination source, course and fine adjustment, iris and diaphragm.

Prepares slides such as wet mount slides, bacterial slides, and blood smears.

Estimates size of object under microscope in microns.

Uses simple microscope maintenance techniques.

Records accurately all observations such as measurements, color changes consistency and in living organisms, behavior.

Is familiar with the normal constituents of urine and possible causes of variations from normal.

Is familiar with methods of collection and preservation of urine.

Makes macroscopic examinations of urine.

Tests urine for reaction and specific gravity.

Tests urine for chlorides, sugar, albumin, ketone bodies, bile pigments, bilirulsin and urobilinogen and for hemoglobin.

Makes microscopic examinations of urine.

Examines urine for casts, cells and crystals.

Can make serologic pregnancy tests on urine.

Makes tests of urine for kidney function.

Examines urine for organic and inorganic substances and for bacteria.

Accurately records urinalysis on specified report forms.

Is acquainted with methods of collecting and preserving blood.

Follows precautions when collecting blood to avoid unnecessary discomfort to patient.

Follows procedure in use of anticoagulants used in preservation of blood collected for testing.

Is aware of factors which affect the quality of smears and follows procedures in preparing smears, selection of stain and method of staining and fixing.

Is familiar with the normal composition and function of blood.

Can examine and report accurately the number, appearance and structure of blood cells.

Can test for sedimentation rate and knows normal values and factors which can affect the sedimentation rate.

Can determine hemoglobin concentration and can compute color index using cyanmethomoglobin acid hematin or colorometric methods.

Can tabulate differential leucocyte count of blood.

Can determine bleeding time, clotting time, hemalocret, prothrombin time of blood and make platelet and reticulocyte count.

Is familiar with terms such as hemagglutination, heteragglutinins and titer.

Understands fundamentals of human blood groups, and principles of conducting blood grouping tests.

Can determine Rh factor.

Can type and cross-match blood.

Can perform miscellaneous blood matching tests.

Understands principles of blood bank procedures and can carry out procedures without error.

Can follow procedures to make protein-free blood filtrates.

Can test for and estimate blood urea nitrogen.

Can use formula to calculate urea clearance.

Can prepare serum and test for serum proteins, albumin, globulin, total protein and "A/G" ratio.

Can prepare serum and test for uric acid.

Can follow established procedures for determining blood sugar and CO2 combining power.

Can perform quantitative estimation of bilirubin calculate, indirect bilirubin and determine icterus index.

Follows procedure to perform tests to determine protein metabolism and to determine enzyme levels and cholesteral levels.

Understands principles of electrolyte studies and can test for and determine concentration of serum calcium, chloudes, sodium, potassium, phosphorus.

Can prepare serial dilutions, detect serum reactions and prepare, preserve and ship serological specimens.

Selects and uses type and species of antigen required to perform agglutination tests for febrile diseases.

Can perform flocculation and qualitative tests for spirochaeta.

Can perform complement fixation tests, colloidal gold tests.

Can perform hemagglutination tests for influenza infection.

Follows procedures for collection, and macroscopic and chemical examination of feces.

Examines feces for bacteria and parasites.

Follows procedures for collection, examination, and chemical analysis of gastric contents.

Understands and can explain to patient, procedures for collection of sputum specimen.

Performs physical and microscopic examination of sputum.

Uses dissecting needle, scissors, scalpel in dissection.

Uses centrifuge according to procedure.

Prepares culture media according to procedure.

Can set up an incubator.

Can use microtome knives, hones, autotechnicon paraffin oven, glassware, embedding mold and other items efficiently.

Can follow procedures and fix, dehydrate, clean, section and stain tissues.

Maintains supply inventory.

Keeps working area and equipment clean.

Orders, checks deliveries, labels and stores laboratory equipment and supplies.

Follows specifically prescribed procedures in soaking, cleaning and sterilizing instruments, trays, basins and other equipment to be used in the laboratory.

Understands principles of sterilization by immersion in boiling water, and follows procedures of method and timing.

Follows prescribed procedures for sterilizing equipment and supplies, demonstrating ability to identify in procedure book sterilization time and method considering thermal death times for organisms, and material to be sterilized.

Safely loads and operates autoclave according to procedures, with attention to placement of items and packs, use of autoclave tapes and calculation of pressure, temperature and time for type of load.

Demonstrates ability to use graphic charts of sterilizers to record temperature duration, and pressure of steam exposure.

UNIQUE PERFORMANCE ELEMENTS

MEDICAL RECORD CLERK

Types accurately at the rate of 45-60 words per minute.

Develops skill in speedy proofreading for errors.

Transcribes histories, physical examinations, consultations, diagnostic test reports, and operative reports for a variety of medical services.

Performs a variety of office procedures using equipment such as adding machine, duplicating equipment, collators, key punch machine, visual aid equipment, microfilm, projection equipment, etc.

Understands techniques and is able to illustrate and interpret data in tables, graphs, etc.

Spells, pronounces, and interprets medical terms correctly.

Follows directions given in medical phraseology.

Uses a glossary, dictionary, or medical dictionary to check meaning and spelling of terms.

Is able to identify and explain meanings of the basic stems, prefixes and suffixes of the most common medical terms.

Is able to identify and explain the meaning of singular and plural noun formations, homonyms and other terms that are easily confused, of the most common medical terms.

Develops ability to identify and explain meanings of scientific and nonscientific descriptive terms, eponyms, common disease terms, abbreviations and hospital terms.

Knows the hospital and unit admission procedures for both routine and emergency admissions, including the responsibilities of other personnel, as well as own responsibilities.

Prepares admission forms for inpatients and outpatients.

Prepares patient index cards.

Uses patient's register.

Files patient index cards and record folders according to alphabetical, numerical, soundex and terminal digit systems.

Develops skill in assembling medical records after discharge.

Checks with discharge list.

Computes census days.

Assigns service classification.

Analyzes medical records for deficiencies.

Prepares daily discharge statistics.

Uses and discusses the value of departmental procedure manual.

Cooperates with other departments in areas involving medical records.

Is familiar with outpatient department procedures involving medical records.

Is familiar with use of specialized registries in follow-up of patients and future research.

Is familiar with the content, use, and requirements of records and reports necessary for patient history, condition, care, diagnostic tests, therapy and progress and checks for completeness and accuracy.

Understands use of, and checks summary sheet of patient's records for completeness and accuracy.

Checks all medical records for correct patient identification data.

Checks that all necessary authorizations have been included in the medical record.

Has sufficient knowledge of anatomy and physiology to detect gross errors and omissions in reports.

Prepares medical records for permanent filing according to specified procedure.

Knows established procedures for preventing and finding misfiles.

Is familiar with various methods of handling, preserving and retrieving medical records.

Demonstrates ability to file and retrieve records using serial number, serial unit number and terminal digit filing systems.

Can discuss the use of a master summary sheet in a unit system.

Can discuss advantages and disadvantages of centralized and decentralized filing systems.

Follows specific procedures in preparing records for microfilming.

Can discuss the advantages and disadvantages of microfilm records.

Compiles patient's, physicians, disease, and operation records.

Is able to index and file records using the dual group, simple index, master code number, alphabetic sequence, and phonetic sequence methods.

Cross indexes diseases and operations.

Appropriately selects and uses file cards, guides and file equipment.

Indexes records using ICD manual procedures and ICDA index.

Is familiar with nomenclature of diseases, decimal digits and their uses in classifying nomenclature of operations, behavior and malignancy code letters, and disease and operation indexes.

Codes diseases and operations using the SNDO.

Is familiar with the types of institutions, other than hospitals, in which medical records are kept.

Compares medical record procedures in specialized and/or long-term hospitals and in nursing homes with those in a general hospital.

Knows hospital and accrediting agency requirements and is able to explain how they affect the medical record.

Demonstrates understanding of the confidential nature of medical information and the medical record.

Is aware of state laws pertaining to the release of medical information.

Is familiar with authorization and consent forms.

Understands and is able to interpret legal requirements of preservation of medical records.

Is familiar with the state laws applying to medical records.

Knows where to find out about laws applying to medical records and institutional policies concerning release of information.

Selects pertinent information from the medical record for release to authorized parties.

Understands principles involved in release of medical information.

Develops an understanding of court procedure for introducing the medical record as evidence.

Checks authorizations for release of information.

Prepares abstracts.

Prepares summaries.

Processes a subpoena duces tecum and prepares a medical record for court.

Is cognizant of medical staff committees that involve the medical record department.

Selects medical records for various committee reviews.

Is familiar with the statistical use of birth, death, morbidity, and communicable disease data.

Is able to discuss the variety of uses of statistics compiled in health agencies.

Is familiar with terminology, purpose, systems and technology of automatic processing of medical data.

Prepares raw data on prepared forms for future handling by computerized systems.

Knows how to keep up-to-data with innovations of automatic data processing.

Uses adding machine accurately.

Tabulates data for research.

Computes percentages and ratios accurately.

Knows the formulas and manner of expression of ratios in vital statistics, and hospital service and medical report statistics.

Abstracts daily statistics from discharges and census sheets.

Follows established procedures, and uses appropriate forms in compiling and reporting care and census statistics for hospital and medical records.

Collects specific data from medical records for compilation in required reports according to procedure.

UNIQUE PERFORMANCE ELEMENTS

NURSE AIDE

Delivers messages.

Escorts ambulatory patients when necessary.

Delivers mail, gifts and flowers to patients.

Is able to explain visiting rules to patient and visitors, and assists in enforcing visiting rules.

Receives and directs visitors.

Plans and gives personal care which the patient cannot do for himself or with which he requires assistance.

Recognizes that needing assistance with personal care may cause embarrassment or anxiety to patients.

Makes notes from observations, unit report and in conference with team leader to assist planning individualized care for each patient assignment and helps nurse assess changes in patient's needs or condition.

Is alert to patient's needs and develops ability to assess patient's condition in order to adapt patient's care to changing individual needs.

Understands the function of the skin in protection, regulation of body temperature and excretion.

Demonstrates skill in bathing bed patients.

Demonstrates skill in adjusting combinations of "routine" procedures for patient comfort and cleanliness according to patient's individual needs.

Assists patients to participate in own care and encourages self-help as allowed.

Arranges equipment and supplies for patient's convenience and gives explanations necessary to assist patients in self-care.

Gives special care to nails, hands and feet using techniques for the prevention of infection.

Develops skill in using nursing measures to promote sleep.

Arranges plan of nursing care to allow extra rest to meet patient's needs.

Makes beds which are neat and wrinkle-free and adaptable to patient's comfort.

Changes patient's beds as needed to provide a clean dry bed.

Reduces dissemination of bacteria by avoiding shaking, waving and pulling bed linen, and by keeping clean and soiled supplies separate.

Changes position of patients frequently to prevent pressure areas and deformities.

Plans care of patient to avoid fatigue and allow time for rest as needed.

Uses adaptability of bed, pillows and postural supports to assist in making patient comfortable and to prevent injury or deformity.

Encourages patient to help plan for his activities in a way that will be most comfortable for him.

Demonstrates ability to operate and adjust positions of high-low electrically operated bed, manually operated gatch frame, stryker frame, circular electric bed and other bed equipment used in the institution.

Uses modifications of the bed to adapt to patient's needs and comfort such as trapeze, bed board, foot board, cradle, crib sides, lifting sheet, protective draw sheets.

Gives special back care and demonstrates understanding of cause and prevention of decubiti.

Gives alcohol back rub and demonstrates skilled use of foam sponge rubber, wool, sheepskin, and air filled pads.

Is aware of patient conditions which may predispose susceptibility to skin pressure problems.

Develops skill in turning and positioning bed patients.

Assists patient with tub bath.

Assists patient with shower.

Assists patient with partial bath in bathroom.

Understands procedure and assists patient with special therapeutic modifications of bathing such as sitzbath, saline bath, oatmeal bath, foot or arm soaks, continuous warm wet soaks.

Shampoos hair of ambulatory patient.

Shampoos hair of bed patient.

Observes condition of hair and scalp.

Combs and arranges hair.

Treats scalp for elimination of pediculi.

Understands the importance and basis of good mouth care and dental hygiene.

Assists patients with cleaning mouth, teeth, and dentures or cleans them for them as necessary.

Sets up mouth care tray and gives frequent care to keep mouth moist and clean for patient who cannot care for himself.

Supervises procedures assisting with elimination without embarrassing patient.

Assists patients in washing hands after using toilet, bedpan, or urinal.

Understands and cares for incontinent patient objectively.

Gives specialized skin care to incontinent patient.

Cares for soiled linen without contaminating self or surrounding area.

Follows procedure in cleaning bedpans and urinals.

Understands and assists with toilet training or retraining.

Recognizes changes in patient's condition and promptly reports change.

Helps patient into wheelchair.

Transports patient in wheelchair.

Helps move patient onto stretcher.

Transports patient on stretcher with safety.

Demonstrates awareness of precautions to observe when moving very weak or unconscious patients.

Assists patient participation in religious activities of his choice.

Organizes patient care to allow time for optimum individual independence in activities.

Develops awareness of importance of close and long-term observations in assessing changes in patient condition.

Notes and reports visible changes in patient's condition such as appetite, intake, progress toward independence, or state of mind.

Understands important factors which influence change in vital signs.

Demonstrates understanding of importance of vital signs to doctor in assessing patient's condition by attention to detail and accuracy in checking, reporting, and recording.

Demonstrates understanding and skill in disinfection and care of clinical thermometer.

Accurately takes temperature and reads clinical thermometer for oral, rectal, and axillary temperatures.

Recognizes deviations from normal temperatures and reports to nurse.

Can identify and describe variations in rate, strength, volume, and rhythm of pulse and relate to health and illness.

Reports deviations from normal rate and rhythm of pulse.

Understands the terms used in reference to blood pressure and factors which cause variations in blood pressure.

Is familiar with stethescope and sphygmomanometer, and accurately measures patient's blood pressure.

Recognizes and reports deviations from patient's normal blood pressure.

Accurately records blood pressure on patient's chart.

Counts patient's respiration without patient's knowledge.

Can describe conditions that affect respiratory rate and describe variations in character and rate of respirations.

Recognizes and reports respirations abnormal in rate or character.

Enters temperature, pulse, and respiration rates accurately on graphic sheet of patient's charts.

Operates standing scale and/or bed scale to weigh patient.

Records patient's weight on chart.

Applies ace bandage.

Sets up equipment for applying casts.

Applies arm slings.

Applies and removes artificial limbs.

Can give an accurate explanation of the use of food and oxygen in cells.

Can list the major functions of the digestive system.

Has a sufficient understanding of the digestive system processes to begin to relate the importance of the modification of diet to a patient's condition.

Plans meals using basic principles of nutrition.

Can explain how the general classes of nutrients are important to health.

Recognizes and utilizes food high in basic nutrients, minerals and vitamins.

Notifies dietary department of number and kinds of meals needed on the unit.

Checks and orders stock supplies of supplemental nourishments.

Requisitions meals.

Notifies dietary department of diet changes.

Requisitions individual patient nourishments.

Requisitions guest trays.

Knows fluid measurement of glasses and cups commonly used by patients.

Helps patient select menu.

Helps patient plan for special diet from list of allowed foods.

Can utilize diet exchange lists to accommodate likes and dislikes.

Recognizes modified therapeutic diets.

Checks food trays against patient's diet list.

Reports discrepancies between diet ordered and what patient receives.

Prepares patients for meals by washing hands, arranging space for tray and placing patient in a comfortable position for meals or nourishment.

Identifies patient and the patient's tray correctly when serving.

Shows understanding of importance of attractively served food in appropriate portions and temperature by assisting with tray arrangement and serving food promptly according to unit procedure.

Serves patient's tray with food and utensils arranged for convenience of patient.

Encourages patient to take diet by arranging food, assisting with food to help patient feed himself, or by feeding patient who is unable to feed himself.

Passes on compliments, suggestions, patient's likes and dislikes, as well as complaints, concerning food and food service, to dietary department.

Knows how to arrange for service of a delayed diet.

Checks food eaten by patient when collecting trays.

Prepares trays for return to dietary department.

Estimates patient fluid intake with reasonable accuracy.

Reports patient diet and fluid intake.

Records intake on patient chart.

Serves between-meal nourishment to patients, within limits of diet orders.

Keeps fresh drinking water available to patient unless contra-indicated.

Assists patient who is vomiting.

Reports and charts character, amount, time and other pertinent information about emesis.

Has sufficient understanding of the gastro-intestinal tract and processes of digestion, absorption and elimination, to understand patient's condition and needs.

Understands importance of regular elimination and causes and prevention of constipation and retention.

Demonstrates understanding of means of promoting elimination.

Recognizes and reports normal and abnormal feces.

Understands types and purposes of enemas.

Gives enema to patient with consideration of patient position and comfort.

Inserts rectal suppository.

Follows procedures in collecting stool specimen.

Assists nurses in changing the dressing of a patient with a colostomy or ileostomy.

Assists patient with colostomy irrigation.

Changes ileostomy bag.

Has sufficient understanding of excretory system to develop understanding of patient's needs and care and to understand reason and importance of specimen collecting and measurement of intake and output.

Totals fluid intake and output on patient's chart at designated times.

Recognizes and reports normal and abnormal urine.

Measures and records fluid intake and output using either metric or U.S. liquid measure system.

Assists patient in placing and removing bedpan or urinal or assists patient into bathroom promptly upon request.

Irrigates catheter.

Measures specific gravity of urine.

Follows appropriate procedure in collecting urine specimen.

Tests urine for sugar and acetone.

Relates variation in patient's weight to changes in diet, fluid balance, activity and medication.

Notes and reports obvious increases or decreases in patient's fluid intake and output, and reports changes.

Can convert ounces to milliliters.

Contributes suggestions for plan to improve patient's fluid intake and output.

Cares for patient with indwelling catheter.

Irrigates an indwelling catheter.

Catheterizes patient.

Applies an external urinary drain for male patients.

Irrigates drainage tube.

Connects drainage tube or catheter to collection bag or bottle, and checks for drainage.

Checks position of drainage tube or catheter.

Understands and uses precautions for treating with dry and moist heat.

Applies heat lamp.

Applies hot water bottle.

Sets up aspiration or suction equipment.

Aspirates patient.

Suctions patient.

Sets up oxygen equipment.

Regulates oxygen flow.

Administers oxygen.

Applies and removes contact lenses.

Applies tourniquet.

Checks and regulates flow of intravenous solution.

Adds additional solution to continue intravenous infusion as prescribed by procedures.

Knows how to discontinue intravenous infusion.

Can check and regulate flow of blood transfusion.

Has a basic understanding of fever, temperature regulation, and reduction of temperature by alcohol sponge bath, ice cap, cool wet packs, and hypo-hyperthermia machine.

Assists in restraining patient.

Obtains plaster in cast room.

Prepares plaster.

Assists in applying cast.

Holds patient's extremities in cast room.

Assists in removing cast.

Adjusts traction apparatus.

Can apply restraints.

Understands the definition of terms used in relation to sterilization and disinfection.

Stores clean, unsterile, and sterile equipment separately, in prescribed position.

Checks expiration dates, color tapes, or other indicators of sterile shelf life of supplies, and separates, resterilizes or discards expired supplies according to established procedure.

Follows special procedures to set up isolation unit.

Has sufficient understanding of the nature of communicable disease, how they are spread and protective techniques to relate to understanding and attention to special procedures in caring for patients on isolation.

Follows special procedures in use of masks, gowns, caps and gloves and handwashing in caring for isolated patients or patients in protective care.

Follows special procedures for safe disposal of contaminated utensils, equipment, waste, linen, etc.

Can teach patient how to use sputum cup.

Prepares bedside bag and teaches patients to dispose of paper wipes.

Can teach patient to collect sputum specimen.

Can teach patient about his contagion and explain special precautions and procedures to patient and visitors.

Sets up identification of contaminated and clean areas for help of other personnel.

Plans care of isolated patient to help allay loneliness and anxiety.

Decontaminates patient's unit and items used in patient care.

Is alert to importance of specimens for pathological studies.

Knows the hospital and unit admission procedures for both routine and emergency admissions, including the responsibilities of other personnel, as well as own responsibilities.

Prepares bed unit for admission of patient.

Carries out unit admission procedures.

Introduces self to patient and tries to make him feel at ease.

Directs or guides new patient to his room.

Prepares admission forms for inpatients and/or outpatients.

Checks the application of patient's identification marker and prepares patient's bed and chart identification markers.

Orients patient to bed unit, hospital personnel and routines, and introduces him to roommates.

Orients patient to policies such as use of intercom signal, smoking rules, noise control, meal hours, visiting regulations and radio and TV use or rental.

Observes patient for physical disabilities, emotional state, cleanliness, presence of vermin.

Reports or charts admission procedures carried out.

Assists doctor with physical examination.

Assists in preparation of preoperative patient according to prescribed procedures.

Shaves operative area according to procedure, inspecting and reporting condition of skin at the site.

Stamps patient's name on operating room and recovery room forms and prepares chart for use during surgery.

Checks operating room preparation forms for completeness and accuracy.

Checks authorization forms for completeness and accuracy.

Checks that preoperative orders have been carried out, that records have been prepared, and verifies patient's identification before transferring him to operating room.

Knows the institution and unit transfer procedures including the responsibilities of other personnel, as well as own responsibilities.

Assists patient in collecting his personal effects for transfer.

Assists with transfer procedures.

Prior to patient's actual transfer, makes sure the unit is ready to receive him.

Knows the hospital and unit discharge procedures including the responsibilities of other personnel as well as own responsibilities.

Helps patient make plans for getting ready for discharge to avoid patient over-excitement and over-exertion.

Checks discharge patient's chart for doctor's discharge orders, discharge summary sheet and nurse's final discharge note.

Checks that clothing and valuables have been returned.

Checks patient's knowledge of health care, diet, prescriptions, treatment and appointment for doctor's office or clinic.

Follows established procedure for notifying resident or attending physician in patient discharge against medical advice.

Has hospital release form signed by patient before he leaves against medical advice.

Assists with care of deceased.

Cleans patient unit after discharge.

UNIQUE PERFORMANCE ELEMENTS

SURGICAL TECHNICIAN

Introduces self to patient and tries to make him feel at ease.

Helps patient into wheelchair.

Transports patient in wheelchair.

Helps move patient onto or off stretcher.

Safely transports patient on stretcher.

Demonstrates awareness of precautions to observe when moving very weak or unconscious patients.

Assists in preparation of preoperative patient, according to prescribed procedures.

Checks that preoperative orders have been carried out, that records have been prepared, and verifies patient identification before transferring him to operating room.

Stamps patient's name on operating room and recovery room forms and prepares chart for use during surgery.

Checks authorization forms for completeness and accuracy.

Checks operating room and recovery room forms for completeness and accuracy before transferring patient.

Shaves operative area according to procedure, inspecting and reporting condition of skin at the site.

Is aware of unit use of policy and procedure manuals, reference books, workbooks, and bulletin boards and keeps these neat and readily available.

Checks procedure book, prior to surgery concerning surgeon's preferences, and operative procedure notes.

Assembles and sets out sterile sponge pads, instruments, packs, linen packs, basins, solutions and other supplies according to surgery schedule and established procedures.

Obtains additional sterile supplies as requested during surgery.

Pours water, sterile preparations, and other solutions as needed before and during surgery.

Knows location of and provides emergency equipment during surgery.

Obtains and verifies intravenous solutions for anesthetist.

Obtains and verifies blood for anesthetist.

Prepares anesthetic stand with airways, suction tubes, syringes, needles, masks and tubing packs as required.

Flushes suction bottles and cleans anesthetic equipment with germicidal detergent according to prescribed procedure, following use.

Places x-rays on viewing box.

Cleans and restocks supply shelves and containers according to established procedure.

Cleans and checks working parts of all operating room equipment.

Reports defective or misplaced equipment to supervisors.

Follows procedure in maintaining, caring for, testing and manipulating surgical instruments, equipment, and supplies.

Follows prescribed procedures for sterilizing equipment and supplies, demonstrating ability to identify in procedure book sterilization time and method considering thermal death times for organisms, and material to be sterilized.

Understands the definition of terms used in relation to sterilization and disinfection.

Follows specifically prescribed procedures or arranges for cleaning and disinfecting walls, floors, storage cupboards, tables, stands, lights, and all equipment standing in or used in the operating room.

Follows specifically prescribed procedures in soaking, cleaning, and sterilizing instruments, trays, basins, and other equipment to be used in the operating room.

Stores clean, unsterile, and sterile equipment separately in prescribed position.

Safely loads and operates autoclave according to procedures, with attention to placement of items and packs, use of autoclave tapes and calculation of pressure, temperature and time for type of load.

Demonstrates ability to use graphic charts of sterilizers to record temperature duration, and pressure of steam exposure.

Interprets and prevents problems arising in autoclaving such as stained instruments, brittle or sticky tubing, damp linens, etc.

If available in the institution, understands use of high vacuum sterilizers and dry heat sterilizers for use with cutting instruments and operates these according to procedure.

If available in the institution, understands use of ethyline oxide gas sterilizers for anesthesia equipment, endoscopes, cardiac catheter and other equipment or supplies which could be damaged by heat or liquid disinfection and is able to operate sterilizers according to procedure.

Understands principles of sterilization by immersion in boiling water and follows procedures of method and timing.

Understands use of ultrasonic equipment and operates according to procedure for cleaning delicate instruments such as those used in eye surgery.

Assembles, lubricates, connects, adjusts, and disconnects drills, suction, and other specialized electrical surgical equipment needed during surgery.

Fills hypodermic syringe as directed by physician.

Operates and adjusts positions of all types of examining operating tables used in the institution. Is familiar with the terminology used in connection with the adjustments of the table and the positioning of the patient.

Operates and adjusts positions of high-low electrically operated bed, manually operated gatch frame, stryker frame and other bed equipment used in the institution.

Is familiar with location and use of equipment for safe positioning of the patient.

Is adept at positioning patient to allow optimum exposure of operative area and maintain free airway, free circulation and avoid postural paralysis.

Is able to list and/or discuss types of microorganisms, classifications of bacteria, characteristics of bacteria and those organisms which present the greatest danger in the operating room.

Checks expiration dates, color tapes, or other indicators of sterile shelf life of supplies, and separates, resterilizes or discards expired supplies according to established procedure.

Returns unused portion of opened sterile packs to unsterile storage positions.

Follows special care procedures for operating room and equipment in cases of skin infection, burns, or surgery involving severely infected area.

Uses gloves and follows special procedures during cleanup following contaminated cases, opening and presoaking all instruments before placing in instrument washer, discarding used and unused linens in specially marked bags, and carefully discarding contaminated materials.

Is aware of and alert to the special fire and explosion hazards in the operating room.

Knows which anesthetic liquids and gases support combustion and which are combustible.

Is aware of the procedures instituted for maintenance of optimum humidity.

Follows procedures in selection of clothing in use of scrub gowns and nonconductive shoes and overboots.

Demonstrates use of fire extinguishers and alarm system.

Sets up aspiration or suction equipment.

Aspirates patient.

Suctions patient.

Sets up oxygen equipment.

Regulates oxygen flow.

Administers oxygen.

Applies tourniquet.

Checks and regulates flow of intravenous solution.

Adds additional solution to continue intravenous infusion as prescribed.

Can discontinue intravenous infusion.

Can check and regulate flow of blood transfusion.

Is alert to importance of specimens for pathological studies.

Receives organ tissue specimens during surgery and prepares specimen for study using clearly stated identification and site of removal, proper preservative, patient's name and hospital record number and surgeon's name.

Sends or takes tissue specimen to laboratory during surgery or immediately after according to established procedure.

Assists draping of patient.

Assists in skin preparation of patient and passes instruments and equipment to surgeons during surgery.

Checks sponge count and instrument count with supervisor or nurse.

Moistens and/or arranges sponges in preparation for use by surgeon.

Prepares and arranges sutures, packing and dressings.

Recognizes instruments and identifies them by correct name.

Immediately reports break in aseptic technique.

Cuts sterile surgical adhesive tape.

Assists with application of tape and dressings.

Holds organs or tissue, sponges incision, aspirates incision, applies hand pressure, holds retractors and cuts sutures as directed by surgeon.

Anticipates needs and requests additional supplies, solutions or instruments from circulating nurse or aide.

Receives additional supplies, solutions or instruments from circulating nurse or aide.

Sorts and separates instruments not to be used again.

Rinses instruments.

Washes and scrubs hands according to specific procedures.

Gowns and gloves according to procedure.

Assists surgeon in gowning and gloving.

Assists with removal of gloves and gown.

Drapes tables and stands according to prescribed procedure.

Sets up tables and stands, basins and linen prior to commencement of surgery according to predicted needs and convenience of surgeons and assistants.

Checks with surgeon or his assistant, prior to commencement of surgery, that all needed equipment and instruments are available.

Can state the effect of and expected postoperative reaction of patients receiving general, spinal, and local anesthesia.

Makes up recovery room bed in preparation for receiving postoperative patient.

Sets up recovery room unit with needed equipment as anticipated for a postoperative patient considering type and extent of surgery and condition of patient.

Assists nurse in care of patient in recovery room observing, reporting, and recording signs, symptoms, condition, and level of consciousness according to individual orders and needs.

Assists patient who is vomiting.

Reports and charts character, amount, time and other pertinent information about emesis.

Demonstrates ability to operate and adjust positions of high-low electrically operated bed, manually operated gatch frame, stryker frame, circular electric bed and other bed equipment used in the institution.

Uses modifications of the bed to adapt to patient's needs and comfort such as trapeze, bed board, foot board, cradle, crib sides, lifting sheet, protective draw sheets.

Has sufficient understanding of excretory system to develop understanding of patient needs and care and to understand reason and importance of specimen collecting and measurement of intake and output.

Totals fluid intake and output on patient's chart at designated times.

Recognizes and reports normal and abnormal urine.

Measures and records fluid intake and output using either metric or U.S. liquid measure system.

Assists patient in placing and removing bedpan or urinal or assists patient into bathroom promptly upon request.

Knows the classification of burns and is able to estimate the extent of burns.

Knows the complication to burn victims of loss of body fluid, pain, psychological distress and infection.

Understands important factors which influence change in vital signs.

Demonstrates understanding of importance of vital signs to doctor in assessing patient's condition by attention to detail and accuracy in checking, reporting, and recording.

Recognizes changes in patient's condition and promptly reports change.

Demonstrates skill in entering temperature, pulse, and respiration rates accurately on graphic sheet of patient's chart.

Demonstrates understanding and skill in disinfection and care of clinical thermometer.

Accurately takes temperature and reads clinical thermometer for oral, rectal, and axillary temperatures.

Recognizes deviations from normal temperatures and reports to nurse.

Has a basic understanding of fever, temperature regulation, and reduction of temperature by alcohol sponge bath, ice cap, cool wet packs, and hypo-hyperthermia machine.

Reports deviations from normal rate and rhythm of pulse.

Understands the terms used in reference to blood pressure and factors which cause variations in blood pressure.

Can accurately measure patient's blood pressure.

Recognizes and reports deviations from patient's normal blood pressure.

Accurately records blood pressure on patient's charts.

Counts patient's respirations without patient's knowledge.

Can describe conditions that affect respiratory rate and describe variations in character and rate of respirations.

Recognizes and reports respirations abnormal in rate or character to nurse.

Can apply restraints.

Can assist in restraining patient.

Checks position of drainage tube or catheter.

Connects drainage tube or catheter to collection bag or bottle, and checks for drainage.

Cares for patient with indwelling catheter.

Irrigates an indwelling catheter.

Catheterizes patient.

Applies an external urinary drain for male patient.

Irrigates drainage tube.

Follows special procedures to set up isolation unit.

Has sufficient understanding of the nature of communicable disease, how they are spread, and protective techniques to understand special procedures in caring for isolated patients.

Follows special procedures in use of masks, gowns, caps and gloves and hand washing in caring for isolated patients or patients in protective care.

Follows special procedures for safe disposal of used utensils, equipment, waste, linen, etc.

Obtains plaster in cast room.

Prepares plaster.

Assists in applying cast.

Holds patient's extremities in cast room.

Assists in removing cast.

Sets up bone fracture equipment.

Can adjust traction apparatus.

Can apply ace bandage.

Can apply arm slings.

Can apply and remove artificial limbs.

Can apply and remove contact lenses.

UNIQUE PERFORMANCE ELEMENTS

VISITING HOME HEALTH AIDE

Gives personal care (e.g. bath, care of mouth, skin and hair) when needed.

Uses economic food plans when planning meals.

Plans for and shops economically for food and non-food supplies.

Can prepare for use of variety of foods.

Can utilize, clean and operate household equipment and appliances.

Can maintain and clean a variety of floors and furniture.

Can make beds which are neat and wrinkle free.

Cooks thoroughly all poultry, fish and pork.

Washes thoroughly all fresh fruits and vegetables.

Observes safety measures in kitchen (e.g., precautions with pot handles, hot liquids, spills on floor, broken glass, sharp tools).

Is able to assist with the care of pets.

Washes and irons patient's clothing and bedding or arranges to have it done.

Plans work considering relative importance of tasks and needs of the family.

Plans for family's likes and dislikes in food selection and preparation.

Helps family to adjust to a routine that meets the needs of the handicapped.

Keeps complete, legible and orderly records of all expenditures.

Plans meals using basic principles of nutrition.

Recognizes and utilizes foods high in the basic nutrients, minerals and vitamins.

Can use exchange lists in meeting nutritional needs.

Can identify and prepare therapeutic or modified diets such as bland or diabetic diets.

Cleans bathroom using sanitary technique.

Stores foods at correct temperature.

Helps family plan for cultural and religious observances.

Acquaints family with ways in which they can better assist a disabled member.

Helps patients to become self-reliant in the activities of daily living.

Can supervise activities of the young children in the family in activities such as play, rest, safety, bathroom, and snack time.

Can supervise and motivate older children in carrying out their household task and accustoms responsibilities.

UNIQUE PERFORMANCE ELEMENTS

WARD CLERK

Knows what medical equipment and supplies are kept in the nurse's station and is able to identify them by name, location, and use.

Keeps stock of supplies in nurse's station.

Delivers mail, gifts and flowers to patients.

Delivers messages.

Escorts ambulatory patient when necessary.

Understands and explains visiting rules to patient and visitors.

Assists in enforcing visiting rules.

Receives and directs visitors.

Notifies dietary department of number and kinds of meals needed on the unit.

Checks and orders stock supplies of supplemental nourishments.

Notifies dietary department of diet changes.

Requisitions individual patient nourishments.

Requisitions guest trays.

Types accurately at the rate of 45-60 words per minute.

Develops skill in speedy proofreading for errors.

Is familiar with the form and use of records and reports that concern the total nursing unit, such as weekly time sheets, daily assignment sheets, etc.

Transcribes patient's temperature, pulse, respirations, from nurse's notations to graphic sheets on patient's charts.

Records unit census, admission, discharge and transfer information and makes out reports for use of other hospital departments according to established procedure.

Makes out reports of patient condition, such as postoperative, critically ill, and changed condition patients, for use of other hospital departments and according to established procedure.

Checks patient charts for proper sequence of pages for convenient unit use, and adds new charting sheets as needed.

Checks patient charts to assure that progress notes have been recorded at prescribed intervals.

Attaches reports of diagnostic tests and treatments to appropriate record sheets in patient chart.

Is able to identify and explain the meaning of singular and plural noun formations, homonyms and other terms that are easily confused.

Develops ability to identify and explain meanings of scientific and nonscientific descriptive terms, eponyms, common disease terms, abbreviations and hospital terms.

Knows the meaning of the descriptive terms applying to laboratory departments (e.g., cytology, histology) and uses a reference list of common tests to check when transcribing doctor's order to laboratory requisitions.

Transfers results of laboratory tests to summary laboratory sheets on patient's charts.

Recognizes and copies accurately common terms and abbreviations used in treatment orders.

Distinguishes between treatments which need equipment ordered or departmental requisitions, and those commonly carried out by unit personnel, and transcribes orders to efficiently implement their execution.

Recognizes and copies accurately generic or brand name of drug and abbreviations for indications of way in which drug is pharmaceutically prepared.

Recognizes and copies accurately symbols of apothecary and metric systems for dosage of drugs.

Recognizes and copies accurately symbols, abbreviations and qualifying phrases concerning method of administration of drugs.

Recognizes and copies accurately symbols and abbreviations for standing orders, p.r.n. orders, single dose orders, and "stat." orders.

Recognizes and notes that a doctor's order needs transcription.

Fills out and sends necessary requisitions for equipment or service, and makes necessary telephone calls for notifications and appointments, to implement doctor's orders.

Transfers doctor's orders to patient care card, medication and treatment tickets or lists, to alert nursing staff to doctor's orders.

Is familiar with hospital transcription symbols and uses symbols on doctor's order sheet to indicate the order has been set in motion.

Recognizes drugs which carry automatic order cancellation times unless renewed and obtains renewal order or cancellation confirmation from doctor.

Transcribes orders for cancellation and/or changes of medication or treatment according to procedure specified for kardex, medicine or treatment ticket and patient chart, and prepares pharmacy credit slip for unused medicine.

Requisitions stock orders, individual prescriptions, narcotics, and "stat." orders from pharmacy, to implement doctor's orders.

Is aware of the requisitions for treatment or services which require a doctor's signature and follows specified procedure in transcribing orders, obtaining authorization and dispatching requisitions.

Demonstrates the understanding of importance of accuracy in transcription of doctor's orders, by asking when in doubt as to meaning of order or when difficulty arises in reading doctor's writing.

Has all doctor's orders transcribed, checked for accuracy and completeness, and initialed by the appropriate nurse or supervisor.

Knows the hospital and unit admission procedures for both routine and emergency admissions, including the responsibilities of other personnel, as well as own responsibilities.

Prepares admission forms for inpatients and/or outpatients.

Prepares new patient chart.

Locates old chart from medical record room.

Notifies intern, resident and/or attending physician of admission of patient.

Enters patient's name on census report and other pertinent unit records.

Orients patient to bed unit, hospital personnel and routines, and introduces him to roommates.

Orients patient to policies such as use of intercom signal, smoking rules, noise control, meal hours, visiting regulations and radio and TV use or rental.

Reports or charts admission procedures carried out.

Knows the institution and unit transfer procedures including the responsibilities of other personnel, as well as own responsibilities.

Assists patient in collecting his personal effects for transfer.

Assists with transfer procedures.

Prior to patient's actual transfer, makes sure the unit is ready to receive him.

Transfers patient's chart, kardex, prescriptions, medicine tickets and all unit records pertinent to his care appropriately when patient is transferred to another room to another unit of or received from another unit, to ensure continuity of care.

Notifies dietary, mail, admitting and other pertinent departments about transfer of patient to ensure continuity of care.

Checks that preoperative orders, have been carried out and records prepared, and verifies patient identification before transferring patient to operating room.

Knows and follows procedures for notification of patient's death, requisitioning shroud pack, preparing autopsy forms, assembling chart and changing unit records.

Knows the hospital and unit discharge procedures including the responsibilities of other personnel as well as own responsibilities.

Checks that clothing and valuables have been returned.

Sends medications charged to patient to pharmacy for crediting to his account.

Checks discharge patient's chart for doctor's discharge orders, discharge summary sheet and nurse's final discharge note.

Follows established procedure for notifying resident or attending physician in patient discharge against medical advice.

Has hospital release form signed by patient before he leaves against medical advice.

Understands use of and checks summary sheet of patient's records for completeness and accuracy.

Checks all medical records for correct patient identification data.

Checks that all necessary authorizations have been included in the medical record.

HEALTH CAREER DEVELOPMENT COURSE

INTRODUCTION:

Following are descriptions of aids and activities to implement a health occupations course on the eleventh grade level. The activities and aids which illustrate principles and guidelines developed by Center staff for implementation of the course, would be possible in a rural or semi-rural setting with limited health services facilities.

The eight-unit course is planned for students with various career goals. Some students will be seeking full-time employment at the end of or in lieu of the twelfth grade of school. Some will plan to enter vocational or technical programs upon completion of high school. Some will plan to enter upon a professional career following undergraduate or graduate programs in colleges and universities. Students with the first mentioned goal will take the course in the eleventh grade as will some of the students with the last two goals. However, it is conceivable that students in the last two goal categories could take the course during the twelfth grade. A second year of work-study or clinically centered instruction would be planned for the twelfth grade for students in the first goal category to prepare them for beginning entry-level positions such as health worker aides.

The description of activities is spelled out in some detail for the first unit of the course with both instructor and student activities for each three-hour session of the four-week unit. Descriptions of student activities only are given in the seven subsequent units.

Teaching aids listed are meant to be illustrative rather than comprehensive. All of the films listed are described and their distributors given in the publication *Film Reference Guide for Medicine and Allied Science 1968* prepared by the Federal Advisory Council on Medical Training Aids (U.S. Government Printing Office, $2.75).

GUIDELINES FOR DEVELOPMENT AND IMPLEMENTATION OF THE COURSE:

1. The curriculum should be constructed to meet the needs of a heterogeneity of students which should include students destined

for health professions and health technologies as well as entry-level jobs in the health field. The course should at all costs avoid being identified as the first year of a program in which girls with limited scholastic ability are trained to be nurse's aides.

2. Emphasis should be placed upon opportunity for each student to clarify his values, examine his commitment to service in a health occupation, establish a priority list of occupational choices and plan realistically for his own career. One desirable outcome of the course could be that the student has examined the world of health occupations intelligently and in depth and has decided that he is not suited for a career in health work. Opportunities should be given the student throughout the course to identify with any type or level of health worker and to change the object of his identification.

3. Maximum use should be made of opportunities for students orientation to a variety of health occupations in a variety of settings. Experiences should include, but by no means be limited to, agencies of the "hospital" type which provide services for actuely ill patients only.

4. Skills development included in the course should be justified on the basis of providing knowledge about the world of health occupations. The traditional nurse's aides "bedside skills" should be deferred until the later units of the course for those students who feel a need for such skills.

5. The structure of the course should foster the gradual development of the student's independence and self-direction. Leadership activities of the teacher should diminish as the course progresses. The student should complete the course with a plan for his career progress which he himself has developed.

6. The role of the teacher should be largely that of a co-ordinator and should include planning for creative use not only of all of the community's available health facilities but also of all existing instructional programs in the high school. Contributions of the natural and social sciences, etc., to the health occupations core should be made by teachers in the respective area rather than duplicated by the health occupations teacher.

7. Plans for the course should be sufficiently flexible to permit the utilization of learning opportunities in health-oriented organizations and institutions as the opportunities arise.

ACTIVITIES AND INSTRUCTIONAL AIDS

UNIT I. INTRODUCTION TO THE WORLD OF HEALTH OCCUPATIONS

TOPIC	STUDENT ACTIVITY	INSTRUCTORS ACTIVITY	TEACHING AIDS
Introduction and Overview	Discusses a career in health and expectations from the course of study. Develops definitions of terms such as, "Health Services" "Health Occupations" and prepares tentative list of health occupations and their functions. Reacts to and discusses film dealing attitudes toward health service agencies. Role-plays the use of interview to elicit information and develops format for interview of ex-patients as to composition and functions of the health worker team.	Describes overall plan of course and variety of outcomes depending upon students' objectives. Guides discussion of students' interests, expectations and perceptions of the health field and health occupations. Acquaints students with resource and reference materials to expand knowledge of health occupations. Guides discussion of reactions to film. Introduces basic concepts of interviewing skills and assists in development of interview format. Assesses achievement of core performance elements.	Printed Materials: *Health Careers Guidebook* *Dictionary of Occupational Titles* Directories of Health-oriented Organizations Film: "The Patient Is a Person" (CAMA)
Health Worker Roles as perceived by Ex-patients	Interviews friends and relatives who have received health services as to their perceptions of roles of various health workers.	Guides students' discussion of roles of health workers and provides leadership in restructuring perceptions of roles of health workers.	

	Discusses with class, functions, obligations and responsibilities of health worker roles. Developes critique of interviewing format and technique and revises interview format and structure accordingly. Discusses measures for protecting patients' privacy. Constructs interview schedule for use in extra-hospital agency as to outpatient's perception of roles on the health worker team, and discusses health worker roles portrayed in film.	Assists with revision of interview structure. Provides leadership in developing rules to safeguard patients privacy and in developing questions to be asked in interviewing outpatients. Arranges with extra-hospital agency for interviewing by selected students. Guides discussion of health roles portrayed in film. Assesses achievement of core performance elements.	Printed Materials: (All of the foregoing) Films: "Home Care" "The Home Health Aide" (ANA-NLN Library)
Health Worker Roles as Perceived by Outpatients	Interviews outpatients in extra-hospital agency as to their perception of roles of health workers. Continues previous discussion of functions, obligations and responsibilities of health workers. Reacts to films and discusses roles of health worker and health professional.	Provides or arranges for needed supervision of interviews. Guides continuation of discussion of roles of health workers and restructuring of perceptions of roles of health workers. Guides and assists students in differentiating levels of function among professional and nonprofessional health workers. Assists students in developing health worker classification.	Printed Materials: (All of the foregoing) Films: "Journey into Medicine" (U.S. Dept. of State, Affiliated Film Productions, U.S.A.)

	Devises scheme for classifying health workers by type and level of activity.	Arranges for guided tour of health service agency and interviews with various level of health workers. Assesses achievement of core performance elements.	"Career: Medical Technologist?" (Amer. Society for Clinical Pathologists) "Man to Man" (Affiliation Film Productions)
Health Worker Roles in the Health Agency	Takes a guided tour of a health service agency and interviews selected health worker or professional. Discusses role of interviewed health worker and the satisfactions and shortcoming of such a role. Prepares a priority list of health occupations in terms of student's interest, abilities and preferences. Submits plan for detailed study of personal, educational and other requirements for entry into the three highest priority health occupations. Reacts to films and discusses interactions and relationships of health team members within the health service agency.	Provides or arranges for needed supervision of students on tour of health agency and interviewing health workers in the agency. Guides and provides leadership of student discussions of the satisfactions and shortcomings of health workers. Assists individual student in arriving at a health occupations priority list commensurate with the student's value system. Assists students in the use of resources to plan for detailed study of requirements for entering high priority health occupations. Guides student discussions of interrelationships of health team members within the health service agency. Assesses achievement of core performance elements.	Printed Materials: (All of the foregoing) File of recruitment health careers pamphlets. Film: "Another Light" (U.S.P.H.S.)

UNIT II. WORKERS WHO PROVIDE HEALTH SERVICES FOR EMERGENCY HEALTH CARE

SUGGESTIONS FOR STUDENT ACTIVITIES

1. Reaction to and discussion of films dealing with first aid and emergency care.

2. Participation in analysis of police and ambulance reports and hospital records on an automobile accident and its victims to determine health services which were provided and the identities of health workers who provided the services.

3. Assistance in structuring and conducting interviews with one or more health workers directly and indirectly involved in providing health services in the above accident to determine the health worker's perception of services he performs and the legal implications and responsibilities of giving emergency care.

4. Development of skill in basic first aid care through classroom, laboratory and simulated experiences including moving and handling victims and taking vital signs.

5. Reexamination and revision as indicated of student's priority listing of health occupations in terms of his preferences.

6. Implementation of plans for detailed study of requirements for entry into student's three highest priority health occupations.

7. Study of opportunities for volunteer health service work in student's community and selection of type of volunteer work best suited to his priority listing.

SUGGESTED INSTRUCTIONAL AIDS

Printed Materials:

(See previous unit)

Red Cross and other first aid instruction books.

References on laws and ordinances pertaining to emergency care.

Medical Dictionary.

Films:

"The Unexpected Moment" (U.S.P.H.S.)

"Accidents Just Don't Happen" (U.S.P.H.S.)

"Pulse of Life" (Pyramid Film Production)

"Hospital Fire Emergency Training" (U.S. Veterans Administration)

"Hands of Action" (U.S.P.H.S.)

UNIT III. WORKERS WHO PROVIDE HEALTH SERVICES FOR CONVALESCENT AND CHRONICALLY ILL PATIENTS

SUGGESTIONS FOR STUDENT ACTIVITIES

1. Construction of check sheets to evaluate the environmental health aspects of nursing homes to be followed by visits to nursing homes and evaluation of their environmental health aspects.

2. Construction of interview structure to interview administrators and supervisors of nursing homes as to how nursing home personnel are used to provide the health services their patients require to be followed by interviews of the administrators by selected students and by class discussion.

3. Interviews with patients in nursing homes as to their perceptions of their health needs and how and by whom their health needs are met. Discussion of interview responses.

4. Interviews of nursing home staff and employees whose occupations match occupations given high priorities by respective students to be followed by a general summarizing discussion of the roles of health workers in the nursing home as perceived by administrators, patients and the workers themselves.

5. Three hours or more of student observation of activities of the health worker with whom he most closely identifies.

6. Volunteer work in a nursing or convalescent home.

7. Reexamination and possible revision of the student's priority listing of health occupations in terms of his preferences.

8. Progress report on detailed study of requirements for entry into the student's three highest priority health occupations.

SUGGESTED INSTRUCTIONAL AIDS

Printed Materials:

(See Unit I)

References on Environmental Control of Hospitals and Nursing Homes.

Reference texts on Care of Aged and Chronically Ill Patients.

Films:

"Environmental Health Aspects of Nursing Homes" (U.S.P.H.S.)

"By Chance or By Choice" (Colorado State Health Department)

"Ready for Edna" (U.S. Public Health Service)

"The Vigil of Jenny Fay" (U.S.P.H.S.)

"Accident Prevention in Nursing Homes" (Michigan State Health Department)

UNIT IV. EXPLORATION OF SKILLS AND KNOWLEDGE REQUIRED FOR HEALTH TEAM MEMBERS IN THE SHORT-TERM HEALTH SERVICE AGENCY

Note: Activities in this unit require considerable groundwork by the instructor in selecting a cooperative hospitalized patient whose illness has required use of many of the services offered by the hospital and in securing clearance for those records and reports essential for students' exploration of the services.

SUGGESTIONS FOR STUDENT ACTIVITIES

1. Participation on one or more interview teams which will structure and conduct interviews to determine the following:

   a. What services the patient perceives as having been done for him and by whom.

   b. What each health worker mentioned on reports and records or cited by the instructor perceives as the service he provided for the patient and the health worker's general appraisal of the skills and knowledge needed to perform the service.

2. Preparation of report on the knowledge and skill required of health worker with whom the student identifies to provide the service supplied to the patient.

3. Participation in class project to depict graphically the total services supplied to the patient by all health workers and the knowledges and skills needed to provide the services.

4. Three or more hours of student observation of the health team worker with whom he most closely identifies.

5. Volunteer work in short-term health service agency.

6. Reexamination and possible revision of student's priority listing of health occupations in terms of his preferences.

7. Progress report on individual student's detailed study of requirements for entry into the student's three highest priority health occupations.

SUGGESTED INSTRUCTIONAL AIDS

Printed Materials:

(See previous units)

References significant to the pathology, diagnosis, treatment and care of patient selected for study.

Films:

"No Margin for Error" (American Hospital Association)

"The Hospital Ward Team" (U.S. Department of Army)

"Intensive Care" (U.S. Public Health Service)

UNIT V. CAREER OPPORTUNITIES IN COMMUNITY HEALTH

SUGGESTIONS FOR STUDENT ACTIVITIES

1. Reaction to and discussion of films dealing with ways in which society organizes to protect the health of the public. Participation in class plan for investigating health career opportunities in institutions, organizations and agencies concerned with environmental health, community mental health, communicable disease control, health facility planning and other public health organizations.

2. Participation on an interview team assigned to an investigation of one or more types of community health agencies including planning and scheduling interviews as well as structuring and conducting interviews to determine the functions and obligations of the health workers role and the preparation necessary for entry into the role.

3. Three or more hours of student observation of the community health worker with whom the student identifies most closely.

4. Volunteer work in health agency according to student's preference.

5. Reexamination and possible revision of student's priority listing of health occupations in terms of his preferences.

6. Report on individual student's detailed study of requirements for entry into the student's three highest priority health occupations.

SUGGESTED INSTRUCTIONAL AIDS

Printed Materials:

(See Previous Units)

Preferences dealing with public health, epidemology, environmental sanitation and community facilities for the promotion of mental and physical health.

Films:

"Health for a City" (University of Southern California)

"The Watch on Health" (U.S.P.H.S.)

"Engineering Your Health" (U.S.P.H.S.)

"The Alaskan Sanitation Aide" (U.S.P.H.S.)

"Bold New Approach" (Mental Health Film Board)

"Team Work for a Controlled Environment" (U.S. Department of the Air Force)

UNIT VI. HEALTH CAREER OPPORTUNITIES IN THE CARE OF THE HANDICAPPED

SUGGESTIONS FOR STUDENT ACTIVITIES

1. Report of personal experiences resulting from simulation of mental or physical handicap. (Examples of simulations are carrying out activities of daily living while blindfolded, while an extremity is immobilized, while feigning inability to speak, hear, or comprehend written word, etc.)

2. Reaction to and discussion of films dealing with care, treatment and rehabilitation of persons with physical and mental handicaps.

3. Report on visits to government and voluntary institutions concerned with the care, treatment and rehabilitation of the handicapped including evaluation of facilities and interviews with health workers who provide care and treatment.

4. Three or more hours of student observation of the health worker with whom the student identifies and who is giving care on therapy to the handicapped.

5. Investigation of possibility of more intensive work experience in the health agency in which the student does volunteer work.

6. Role playing of job interview and adjustment to employment following session conducted by health agency administration or personnel officer on desirable and undesirable traits in the prospective employee.

7. Preparation of first draft of student's plan for his own career including plans for education, financing and work experience.

SUGGESTED INSTRUCTIONAL AIDS

Printed Materials:

(See previous units)

References dealing with causes, care and treatment of physical and mental handicaps.

Films:

"Handle With Care" (U.S. Public Health Service)

"Alone Without Help" (National Society for Crippled Children)

"Recreational and Occupational Therapy" (U.S. Office of Education and U.S. Public Health Service)

UNIT VII. ADJUSTING TO THE ROLE OF A HEALTH WORKER

SUGGESTIONS FOR STUDENT ACTIVITIES

1. Reacting to and discussion of films dealing with work adjustments and human relations.

2. Part-time employment or more extensive volunteer work in line with student's health occupations preferences.

3. Participation in group discussions of solutions to problems of adjustment to the health worker role.

4. Laboratory practice of basic health worker skills according to student needs.

5. Refinement of student's career plan.

SUGGESTED INSTRUCTIONAL AIDS

Films:

"More Than Words" (Henry Strauss Distributing Company)

"1104 Sutton Road" (U.S.P.H.S.)

"Production 5118" (U.S.P.H.S.)

Training films based upon specific needs of students.

UNIT VIII. HEALTH OCCUPATION AS AN OPPORTUNITY FOR SELF-IMPROVEMENT AND GROWTH

SUGGESTED STUDENT ACTIVITIES

1. Part-time employment in line with student's health occupations preferences.

2. Development of skill in locating resources for self-improvement and growth as a health worker.

3. Designing and executing a plan for self-improvement and growth applied to part-time employment.

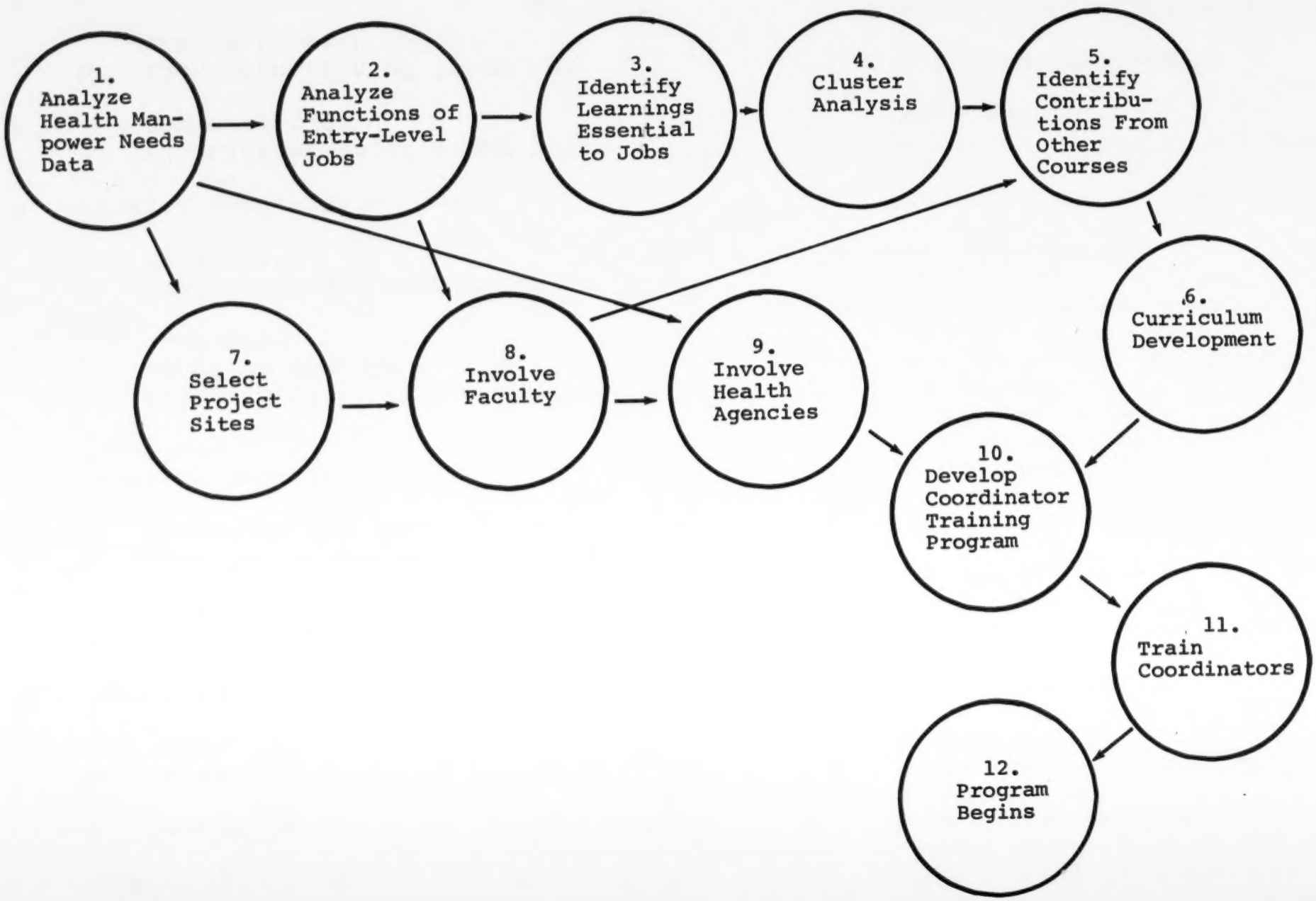
4. Completion of student's career plan.

5. Self evaluation of achievements of core performance elements.

APPENDICES

ACTIVITY FLOW CHART

RURAL HIGH SCHOOL HEALTH OCCUPATIONS CAREER DEVELOPMENT PROGRAM


1. Analyze Health Manpower Needs Data
2. Analyze Functions of Entry-Level Jobs
3. Identify Learnings Essential to Jobs
4. Cluster Analysis
5. Identify Contributions From Other Courses
6. Curriculum Development
7. Select Project Sites
8. Involve Faculty
9. Involve Health Agencies
10. Develop Coordinator Training Program
11. Train Coordinators
12. Program Begins

ACTIVITY FLOW CHART (Continued)

1. Analysis of Health Manpower Needs Data
   a. Select top-priority content areas.
   b. Select top-priority school settings.
2. Functional Analysis Entry Level Jobs
   a. Select entry level jobs related to top-priority content areas.
   b. Compile consensually defined functions for jobs.
3. Identify Learning Essential to Functions
   a. Analysis of existing course outlines to compile initial list of learnings.
   b. Evaluation and completion of list by experts.
4. Cluster Analysis
   a. Identification of among-job commonalities.
   b. Identification of learnings unique to each job.
5. Identification of Contributions From Other Content Areas
   a. Curriculum experts judgements on relevancy of essential health occupations learnings to existing course content.
   b. Class room teachers validation of relevancy.
6. Curriculum Development
   a. Contributions from other content areas and strategies for utilizing other areas.
   b. Health occupations core.
   c. Unique learnings for separate entry-level jobs.
   d. Implementation of curriculum with instructional materials.
7. Selection of Project Sites
8. Faculty Involvement
   a. Participation in Step 5 (2).
   b. Selection of health occupations coordinators.
9. Health Agency Involvement
   a. Agency orientation to program.
   b. Identification of educational experiences offered by agency.

10. Development or Health Occupations Coordinator Training Program

    a. Skills needed in health occupations core.

    b. Skills needed in auto-instruction and individualized instruction.

    c. Strategies for cooperative use or instruction in other content areas.

11. Train Health Occupation Coordinators

DECISION-MAKING STRATEGIES IN THE SELECTION OF SITES AND CONTENT AREAS FOR THE HIGH SCHOOL HEALTH EDUCATION PROJECT

STEP ONE: SELECTING TOP-PRIORITY CONTENT AREAS

QUESTION	DATA TO PROVIDE ANSWER
1. Which content areas will best prepare the non-college-bound youth for job entry in the health field?	1. Statistics, studies and expert's opinions of regional and local needs for subsidiary health workers.
2. Which content areas will best prepare the non-college-bound but migratory youth for job entry in the health field?	2. Statistics, studies and recommendations of national advisory groups on national needs for subsidiary health workers.
3. Which content areas offer the best background to students who wish to continue in advanced programs which prepare health technicians and professionals?	3. Statistics, studies and recommendations of advisory groups on local, regional and national needs for health technicians and professionals.

STEP TWO: SELECTING TOP-PRIORITY SCHOOL SETTINGS

QUESTION	DATA TO PROVIDE ANSWER
4. Which educational systems serving isolated (rural and semi-rural) areas would be willing and able to participate in the project?	4. Location, characteristics and attitudes of school systems serving isolated communities.
5. In which of the above systems are there high schools in reasonably close proximity to clinical agencies?	5. Proximity of hospitals, nursing homes and other health agencies to eligible schools.

6. Which of the clinically-feasible high schools settings provide greatest assurance for employment of the high school graduate?	6. Evaluation of health agency's attitude toward employment of high school youth and toward career migration within the agency.
7. Which of the high priority settings are offering greatest evidence of project acceptance by the health community?	7. Evaluation of attitudes of local public health officials, and organizations of hospitals, nursing homes, health professionals, etc.

STEP THREE: INTERRELATING SCHOOL AND CONTENT AREAS

QUESTION	DATA TO PROVIDE ANSWER
8. Which of the top-priority content levels are best suited to the top-priority school settings?	8. Results of the above analysis and evaluation.

CLUSTERING STRATEGY

ACTIVITIES	RESOURCES
1. Selection of 10 or so occupations which: a. Have been prepared for at high school level or do not require high school graduation for job entry. b. Statistics and expert opinion indicate are in short supply in the Rocky Mountain States. c. Are relevant to health occupations requiring technical or professional preparation.	Center Staff
2. Determining on the basis of functional descriptions of the selected occupations, the functions of each.	Center Staff
3. Analysis of course outlines and course descriptions to identify the learning contributing to each function of each selected occupation.	
4. Evaluation of learnings by experts as to their: a. Relative essentiality to performance of the function. b. Whether best taught in the classroom or laboratory or on the job.	1. Supervising Health Professionals. 2. Health Agency Administrators. 3. Inservice and other health educators. 4. Incumbent workers.
5. Analysis of preceding evaluation: a. Identification of significant learning for each function of each job.	Center Staff

b. Identification of commonalities of significant learning among jobs.	
6. Expert evaluation of essential learning as to relevance and application to existing high school courses other than health occupations.	Curriculum experts in Academic and Vocational Education.
7. Analysis of preceding evaluation, compilation of lists of learnings applicable to each content area.	Center Staff
8. Evaluation of appropriateness and sequential placement of preceding list of learnings by classroom teachers in respective areas.	Classroom teachers of chosen pilot schools.
9. Curriculum construction:	Center Staff Consultants
a. Curriculum contributed by existing content areas.	
b. Health occupations core curriculum.	
c. Curriculum specific to each respective occupation.	

SCHEME FOR CATEGORIZING
ESSENTIAL SKILLS AND KNOWLEDGE

A. BY AREA OF KNOWLEDGE

1. Pertinent to hospital management and organization.

2. Pertinent to maintenance of asepsis.

3. Pertinent to structure and function of the human body.

4. Pertinent to means of communication of ideas within the health team (terminology, names, and symbols).

5. Pertinent to the function and operation of equipment used in diagnosis and therapy.

6. Pertinent to procedures other than those used in patient care.

B. BY AREA OF SKILL

1. Pertinent to skill in operating equipment and handling instruments.

2. Pertinent to procedures used in patient care and treatment.

3. Pertinent to procedures for maintaining asepsis (cleaning, sterilization, and disinfection).

4. Pertinent to communication skills (reading, transcribing, written and oral reporting).

5. Pertinent to measurement (reading and interpreting scales, and counting).

6. Pertinent to use of accurate medical terminology.

C. BY AREA OF ATTITUDE

1. Pertinent to valuation of maintenance of aseptic environment.

2. Pertinent to valuation of mental alertness and competency.

3. Pertinent to valuation of accuracy, scientific (unbiased) thinking and reporting.

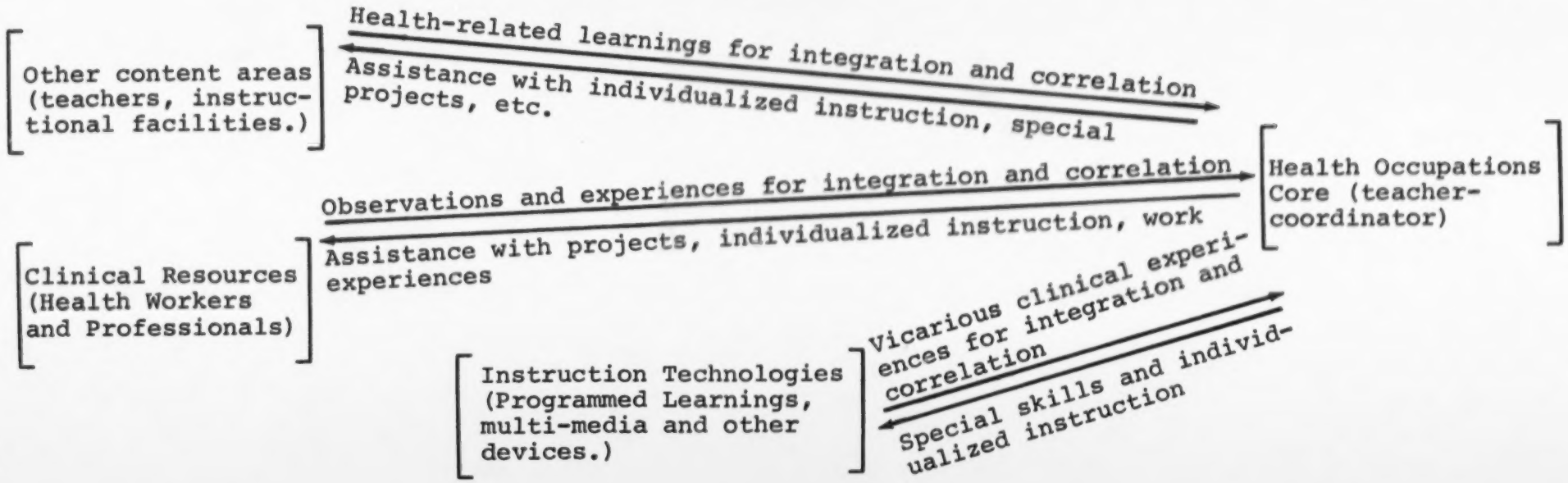
4. Pertinent to commitment to and the responsibilities of the role of members of the health team.

5. Pertinent to sensitivity toward the feelings of others, including valuation of tactfullness and recognition of the worth of others.

TWO PROBLEM AREAS IN THE LOCATION OF HEALTH OCCUPATIONS PROGRAMS IN THE RURAL SETTING AND SUGGESTED STRATEGIES FOR OVERCOMING THEM

PROBLEM AREAS	STRATEGIES
1. Limitations of Instructional Resources	1. Employment of health occupations teacher-coordinator who will correlate health-pertinent instructions from existing courses with the health occupations core devising an integrative core of health occupations learnings which will provide for individualized learning experiences (projects, etc.) using resources or existing content areas, clinical facilities, etc. and maximum use of instructional aids and technological devices to provide the specialized skills knowledge needed to prepare for specific occupations.
2. Limitations of student's first hand experiences with health occupations	2. A maximum exploitation or educational experiences in voluntary, proprietary and governmental health facilities within reasonable traveling distance. Patient-centered health occupations core using video tapes or films of health workers and clients from which learnings evolve.

STRATEGIES PARADIGM


Other content areas (teachers, instructional facilities.)
Health-related learnings for integration and correlation
Assistance with individualized instruction, special projects, etc.
Observations and experiences for integration and correlation
Assistance with projects, individualized instruction, work experiences
Health Occupations Core (teacher-coordinator)
Clinical Resources (Health Workers and Professionals)
Instruction Technologies (Programmed Learnings, multi-media and other devices.)
Vicarious clinical experiences for integration and correlation
Special skills and individualized instruction

EXAMPLES OF CONTRIBUTIONS TO HEALTH OCCUPATIONS EDUCATION FROM OTHER CONTENT SOURCES

AGRICULTURE
Agriculture as a means for preserving man's health and well-being, regulation of agriculture to prevent diseases.

ART
Human anatomy, medical illustration.

BIOLOGY
The human being as a biological organism, interrelations between man and other organisms.

BUSINESS AND OFFICE
Medical record keeping, business and managerial skills used in providing health services.

CHEMISTRY AND PHYSICS
Chemical and physical reactions and systems in the body. The use of chemical and physical agents in the treatment of disease.

CLASSICAL LANGUAGES
Greek and Latin roots basic to medical terminology.

DISTRIBUTIVE EDUCATION
Distributive of health products and pharmaceuticals.

ENGLISH
Objective reporting and recording as a basis for medical notation.

GEOGRAPHY
Geography as an epidemiological factor in health and disease.

HISTORY
Historical perspective of the development of medicine and health occupations.

HOME ECONOMICS
Role of family members in safeguarding health.

SOCIAL STUDIES

Role of society in providing services for the preservation and restoration of health.

TRADE AND INDUSTRIAL EDUCATION

Industrial health and safety. Operation and maintenance of diagnostic and therapeutic machinery.

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